SERVICE MANUAL

PM630

marantz®

model PM630

Stereo Pre Main Amplifier

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:
Parts can be ordered either by mail or by telex. In both cases, MARANTZ part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

MARANTZ S.A.
EUROPEAN PARTS DEPARTMENT
2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING:
Parts may be ordered from the following addresses:

EUROPE

MARANTZ S.A.
European Parts Department
2, Avenue Léopold III
B-7120 Péronnes-lez-Binche
Belgium
Telex: 57589

MARANTZ NORSKE A.S.
Refstadalleen 13
Oslo 5
Norway
Telex: 19659

MARANTZ DENMARK
Bregnerødvej 132b
3460 Birkerød
Denmark
Telex: 39137

MARANTZ GMBH AUSTRIA
Wiedner Hauptstrasse 98
1050 Wien
Austria
Telex: 113583

MARANTZ S.A.
326 Avenue Louise Bte 32
1050 Brussels
Belgium
Telex: 26602

MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

MARANTZ BELGIUM
45 Rue Auguste Van Zande
1080 Brussels
Belgium

MARANTZ SVENSKA A.B.
Svartviksvangen 56
Traneberg - Box 12016
16112 Bromma
Sweden
Telex: 13449

MARANTZ GERMANY GMBH
Max Planckstrasse, 22
6072 DREIEICH 1
West Germany
Telex: 4185316

MARANTZ AUDIO U.K. LTD.
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

AUSTRALIA

MARANTZ AUSTRALIA PTY., LTD.
32 Cross Street
Brookvale, N.S.W. 2100
Australia
Telex: 24121

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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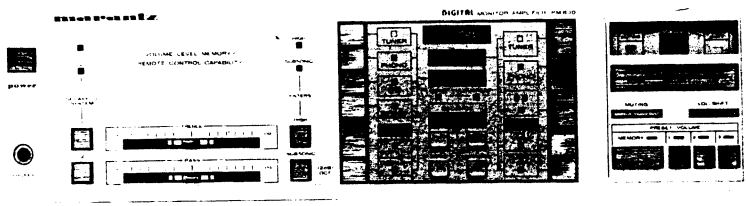
MODEL PM630 STEREO PRE MAIN AMPLIFIER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM630 Stereo Pre Main Amplifier.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM630 consists of the following units. Each unit mounted on a printed circuit board is discribed within the square enclosed by a bold dotted line on the circuit diagram.

1. **Main Amp . . . . . .mounted on P.W. Board P700**
2. **Tone Control Amp . . . .mounted on P.W. Board PE00**
3. **Function/Volume . . . . .mounted on P.W. Board PS00**
4. **Logic Control . . . . . .mounted on P.W. Board PL00**
5. **Speaker Output. . . . . mounted on P.W. Board PW00**
6. **Speaker Switch. . . . . .mounted on P.W. Board PT00**
7. **Speaker LED . . . . . .mounted on P.W. Board PT50**
8. **Power Switch . . . . . .mounted on P.W. Board P000**
9. **Head Phone . . . . . mounted on P.W. Board PW50**
10. **Front LED Switch. . . . mounted on P.W. Board PY00**
11. **Fuse . . . . . mounted on P.W. Board P850.**

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM630 Stereo Pre Main Amplifier.

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer (0 ~ 140V AC, 10A)	Adjust level of primery power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

3. MICRO COMPUTER

a. Apart from the power switch, speaker selector switch, tone control and volume control, all the functions on the front panel are controlled via a microcomputer consisting of 2 parts – LN6416E (QL11) and LC6502 (QL09).
The EASY/REMOTE signals are also processed by the microcomputer.

b. By backing up the microcomputer with capacitor, it is possible to maintain the unit in the condition it was prior to switching the power OFF for approx. 2 hours. If the back-up voltage drops below V2/2 (approx. 2.5 V), the unit returns to its original condition (Position: Tuner Direct, Volume: "00" and all other functions OFF).

c. There are 2 built-in volume memories – a relative volume memory which makes use of the special features of the microcomputer, and an absolute volume memory:
Relative volume memory –
Can compensate the level difference between PHONO, TUNER and CD.
Absolute volume memory –
Can memorize 3 arbitrary points on the volume scale.

4. LED MATRIX ARRANGEMENT TABLE

SEG / SCAN	0	1	2	3	4	5	6
0	1' DIGIT a	1' DIGIT b	1' DIGIT c	1' DIGIT d	1' DIGIT e	1' DIGIT f	1' DIGIT G
1	10' DIGIT a	10' DIGIT b	10' DIGIT c	10' DIGIT d	10' DIGIT e	10' DIGIT f	10' DIGIT G
2	FUNCTION TUNER	FUNCTION PHONO	FUNCTION AUX	FUNCTION TAPE 1	FUNCTION TAPE 2		
3	REC MODE DIRECT	REC MODE TUNER	REC MODE PHONO	REC MODE AUX	REC MODE COPY 1→2	REC MODE COPY 2→1	
4		MUTING ON	LEVEL MEMORY	LEVEL PRESET 1	LEVEL PRESET 2	LEVEL PRESET 3	
5						BALANCE CENTER	
6	LACTH OUT LOW FILTER	LACTH OUT HIGH FILTER	TACTH OUT MONO		LACTH OUT MM	LACTH OUT MC	LACTH OUT LOUDNESS

5. KEY MATRIX ARRANGEMENT TABLE

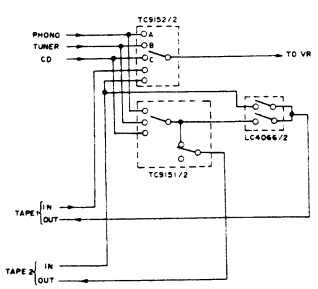
DIN / SCAN	0	1	2	3	4	5
0	BALANCE L	BALANCE R		VOLUME UP		VOLUME DOWN
1	MUTING		LEVEL MEMORY	LEVEL PRESET 1	LEVEL PRESET 2	LEVEL PRESET 3
2	FUNCTION TAPE 2		FUNCTION TUNER	FUNCTION PHONO	FUNCTION AUX	FUNCTION TAPE 1
3	REC MODE COPY 1→2	REC MODE COPY 2→1	REC MODE DIRECT	REC MODE TUNER	REC MODE PHONO	REC MODE AUX
4						
5						
6	LATCH OUT MM/MC	LATCH OUT LOUDNESS	LATCH OUT LOW FILTER	LATCH OUT HIGH FILTER	LATCH OUT MONO	

6. PHONO AMP

An FET differential input stage is installed in the primary stages of the OP Amp in order to improve the S/N ratio.
For MC/MM selection, input impedance and gain is varied by means of a plunger switch.

7. INPUT SELECTOR SECTION

a. This section, as shown in the diagram below, consists of 3 analog switches – TC9152P (QS02) for the input selector, TC9151P (SQ01) and LC4066 (QS06) for the Rec selector.
b. When the Rec Selector Direct is ON, contacts A, B, C of TC9152P and TC9151P are interlocked, and the mode can be selected by means of the Input Selector Switch.
c. An additional back-up is provided at Tape Out, which protects the analog switches when the output terminals are shorted and nullifies the effect of tape deck impedance on the unit.
d. When changing the input selector, the Mute signal from pin 5 of TC9152P mutes the volume circuit in the next stage.



8. VOLUME SECTION

a. Consists of 3 IC's – electronic volume TC9154 (QG01), analog switch LC4066 (QG03) and the OP Amp NJM4560 (QG02, QG04).
The level diagram for the max. peak signal at this stage is given in Fig A.
As the electronic volume has a low breakdown voltage (± 6 V), there is an attenuation of 10dB in the input stage so as to avoid applying a signal greater than the power supply voltage to the electronic volume, but this is later compensated by an arrangement which economizes 10dB in sensitivity. Also, when listening at low output levels, the S/N ratio is improved with the volume shift OFF.
b. The electronic volume is controlled by a serial code from the microcomputer. Balance is controlled by operating left and right channels separately in the microcomputer.

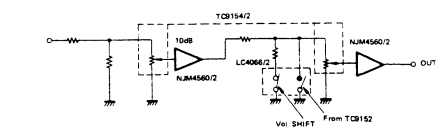


Fig A

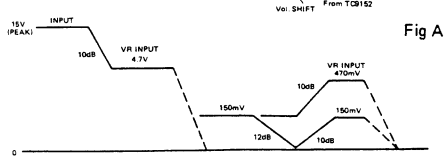
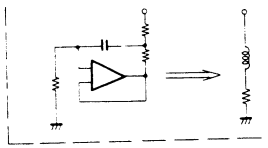


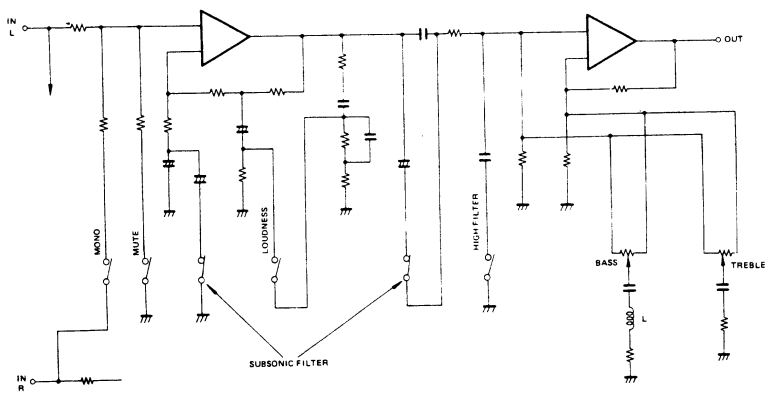
Fig B

9. TONE CONTROL SECTION

In this stage, MONO, HIGH FILTER, SUBSONIC FILTER, LOUDNESS, MUTE, TREBLE and BASS are controlled by the OP Amp and analog switches.
For the circuit diagram, refer to figure below.
The SUBSONIC FILTER consists of 2 stages in order to obtain 12 db/oct.
The BASS L consist: of a simulated inductor which uses the OP Amp.

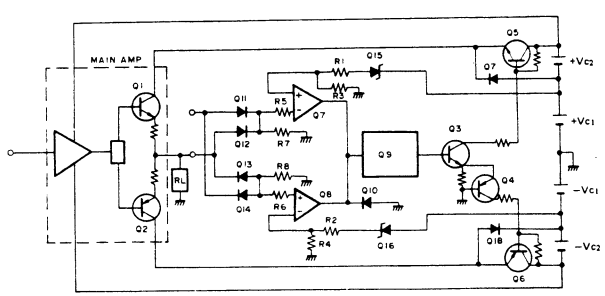
SIMULATED INDUCTOR





10. MAIN AMP SECTION

In the main amp circuit, IC's are used for the voltage amplification stage and transistors for the current amplification stage.
The basic circuit, as shown below consists of a comparator, Q15 and Q16, which compares a reference voltage to the output. If the output rises, multivibrator Q9 emits a pulse at fixed intervals of about 400 ms. This drives Q5 and Q6, and applies a high voltage to the current amplifier stage. Q9 is a re-trigger type multivibrator, and if an output higher than the comparator reference voltage appears within 400 ms, the high voltage is maintained.



Q1, Q2 . . . . . Main output transistor
Q3, Q4 . . . . . Switching Transistor
Q5, Q6 . . . . . High Voltage Transistor
Q7, Q8 . . . . . Comparator
Q9 . . . . . Mono Multivibrator
Q10 . . . . . Clamp Diode
Q11 ~ Q14 . . . Rectifying Diode
Q15, Q16 . . . . Level Comparator Diode
Q17, Q18 . . . . Power Supply Switching Diode
±VC1,2 . . . . . Power Supply
R1 ~ R8 . . . . . Voltage Dividing Resistor

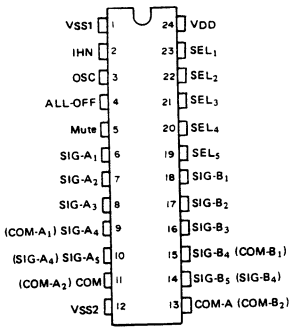
11. C-MOS DIGITAL IC TC9151P/TC9152P

This IC is used for feather-touch function selectors, and incorporates analog switches with a high breakdown voltage.

○ **Maximum Ratings (Ta = 25°C)**

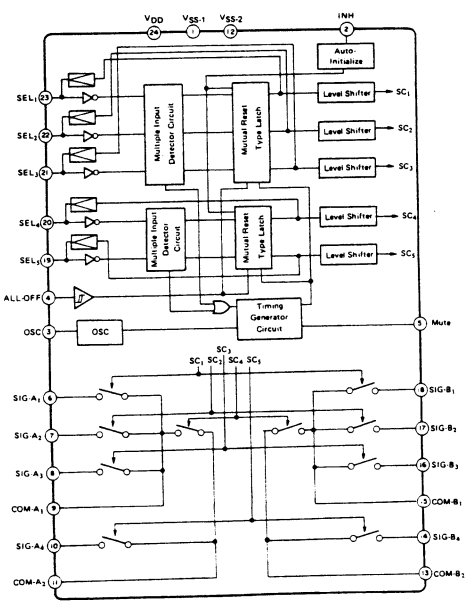
Item	Symbol	Ratings	Unit
Supply Voltage (1)	VDD VSS1	16	V
Supply Voltage (2)	VDD VSS2	32	V
Input Voltage (VSS1)	VIN(1)	−0.3 ~ VDD + 0.3	V
Input Voltage (VSS2)	VIN(2)	−0.3 ~ VDD + 0.3	V
Power Dissipation	PD	800	mw
Operating Temperature	Topr	−30 ~ 75	°C
Storage Temperature	Tstg	−55 ~ 125	°C

PIN CONNECTION

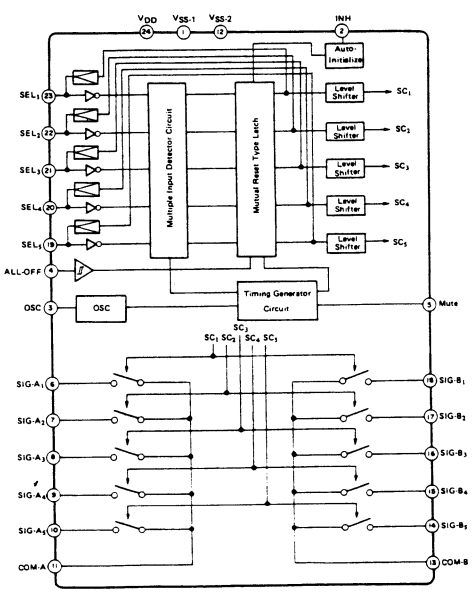


BLOCK DIAGRAM

TC9151P



TC9152P



12. PINS AND THEIR FUNCTIONS

TC9151P & TC9152P

Pin No.	Symbol	Functional Description
2	INH	Inhibit input terminal With "H" Level signals, permits normal operation. With "L" Level signals, inhibits operation.
3	OSC	C, R connection terminal for oscillator. The frequency of this oscillator determines muting time and analog switch selection timing.
4	ALL-OFF	"ALL ANALOG SWITCHES OFF" command input terminal. If an "H" Level signal is input to this terminal, all analog switches go OFF.
5	MUTE	Muting signal output terminal. When an "H" Level signal is received at the selector input terminals (SEL−1 ~ SEL−5), this terminal goes "H" for a certain time during which the analog switches change over. Muting output time can be set freely by the osicllator frequency.
24 1 12	VDD VSS1 VSS2	Power supply voltage terminal. For the control system, connect VDD − VSS1. For the analog switch system, connect VDD − VSS2.
19 20 21 22 23	SEL−5 SEL−4 SEL−3 SEL−2 SEL−1	Analog switch selector input terminals. If an "H" Level signal is applied to terminals SEL−1 ~ SEL−5, the analog switch selected goes ON. In TC9151P, SEL−1, SEL−2, SEL−3, and SEL−4, SEL−5, are in a mutual reset arrangement, so that in the absence of the selecting input they are OFF. In TC9152P, SEL−1 ~ SEL−5 are all in a mutual reset arrangement. This I/O terminal is also used for the display driver output.

TC9151P

Pin No.	Symbol	Function Description
6, 18	SIG−A1 SIG−B1	Signal input terminal 1. When SEL−1 is selected, analog switch 1 goes ON, and this terminal and terminal COM−1 then become conducting.
7, 17	SIG−A2 SIG−B2	Signal input terminal 2. When SEL−2 is selected, analog switch 2 goes ON, and this terminal and terminal COM−1 then become conducting.
8, 16	SIG−A3 SIG−B3	Signal input terminal 3. When SEL−3 is selected, analog switch 3 goes ON, and this terminal and terminal COM−1 then become conducting.
9, 15	COM−A1 COM−B1	Analog switch common terminal 1. This is a common terminal for analog switches SIG1 ~ SIG3 above.
10, 14	SIG−A4 SIG−B4	Signal input terminal 4. When SEL−5 is selected, analog switch 5 goes ON, and this terminal and terminal COM−2 then become conducting. When SEL−4 is selected, analog switch 4 goes ON, and analog switch 5 goes OFF.
11, 13	COM−A2 COM−B2	Analog switch common terminal 2. This is a common terminal for analog switches 4, 5 above.

TC9152P

Pin No.	Symbol	Function Description
6, 18	SIG−A1 SIG−B1	Same as for TC9151P.
7, 17	SIG−A2 SIG−B2	
8, 16	SIG−A3 SIG−B3	
9, 15	SIG−A4 SIG−B4	Signal input terminal 4. When SEL−4 is selected, analog switch 4 goes ON, and this terminal and terminal COM−4 then become conducting.
10, 14	SIG−A5 SIG−B5	Signal input terminal 5. When SEL−5 is selected, analog switch 5 goes ON, and this terminal and terminal COM−5 then become conducting.
11, 13	COM−A COM−B	Analog switch common terminal.

13. ADJUSTING PROCEDURES

- **IDLING ADJUSTMENT**

1. Input and output are adjusted with the unit in the OPEN condition.
2. Adjust both left and right channels to give 8 mV DC (idling current 3.5 mA).

	Measuring points	Parts to be adjusted
L channel	L ch output and T.P.I.	R715
R channel	R ch output and T.P.I.	R716

14. VOLTAGE CONVERSION

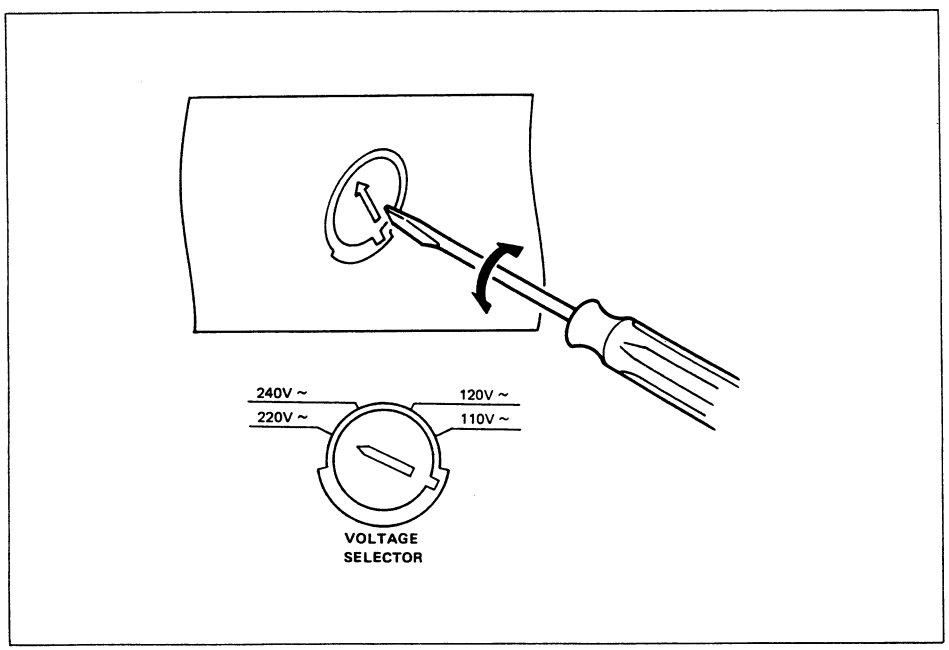
- **EUROPEAN MODEL ONLY**

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION

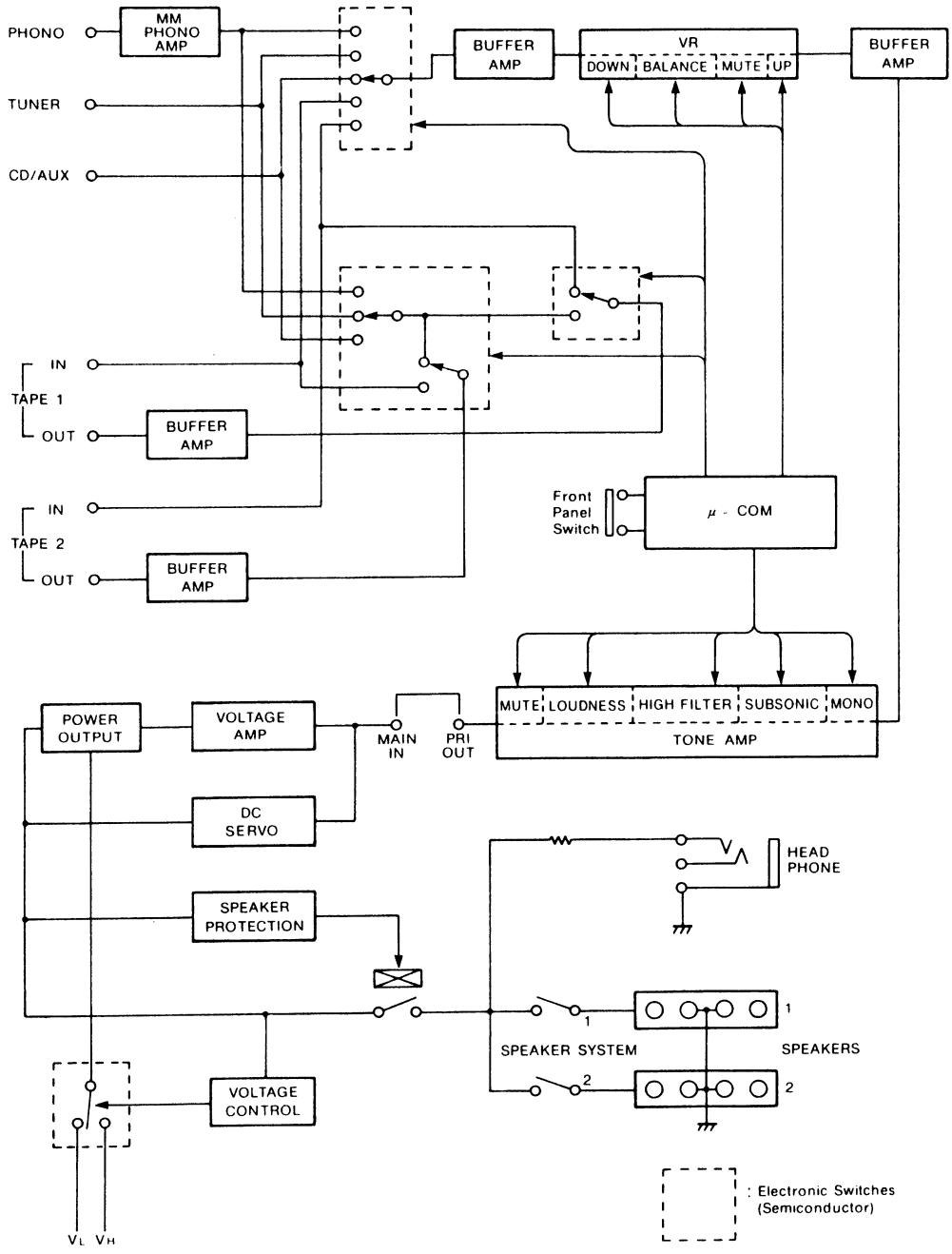
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



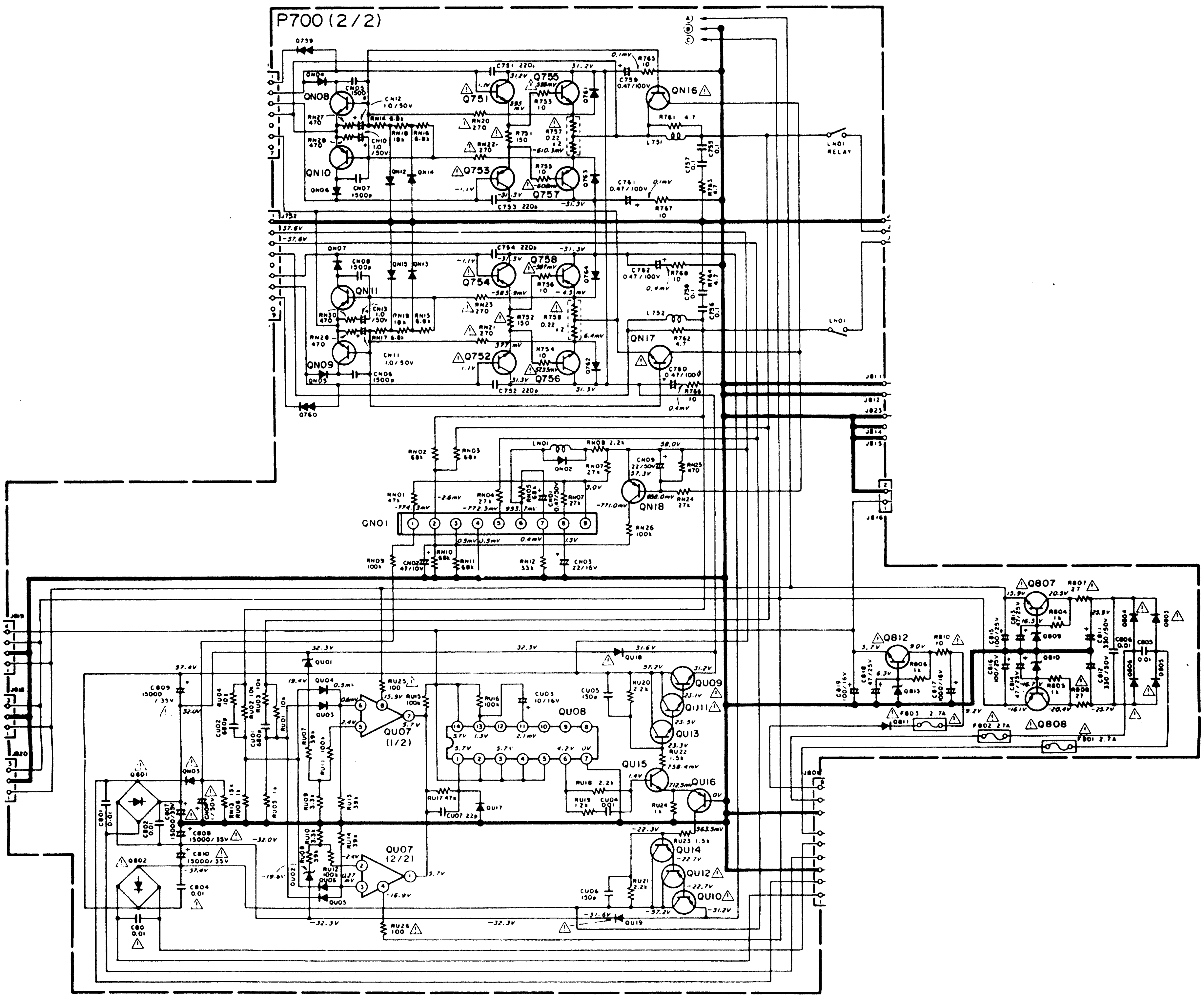
Note on safety:
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

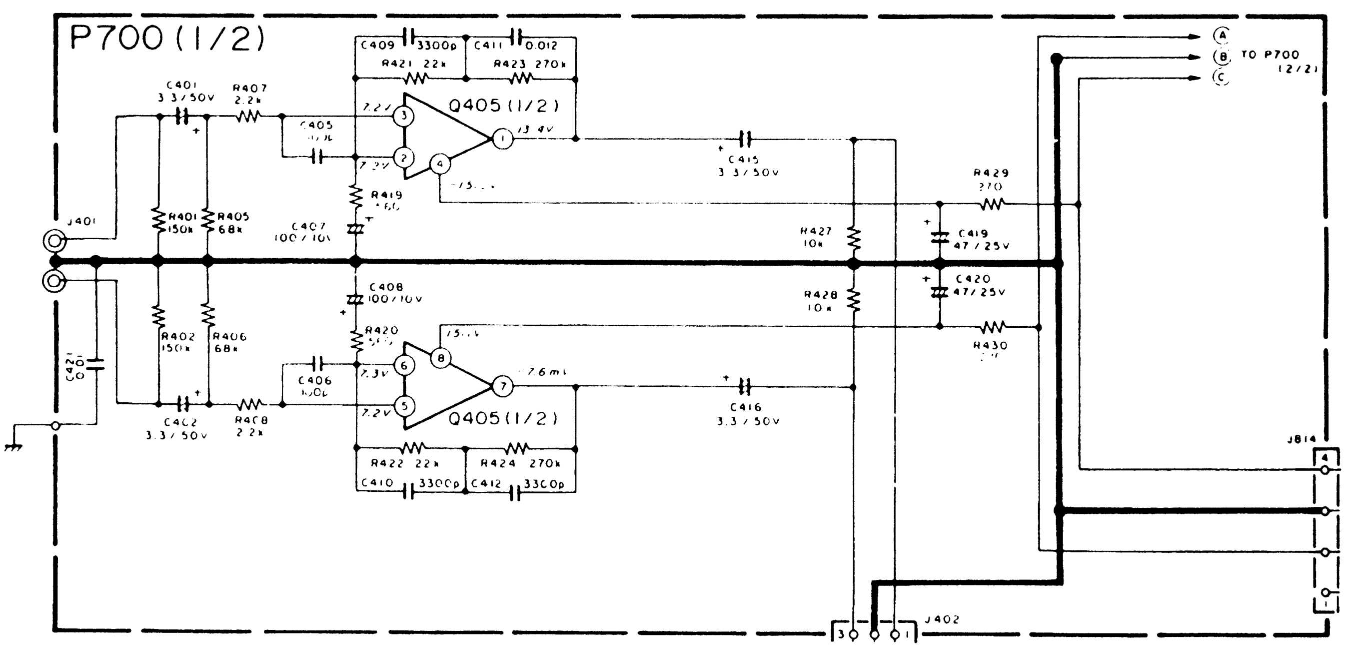
15. FUNCTIONAL BLOCK DIAGRAM

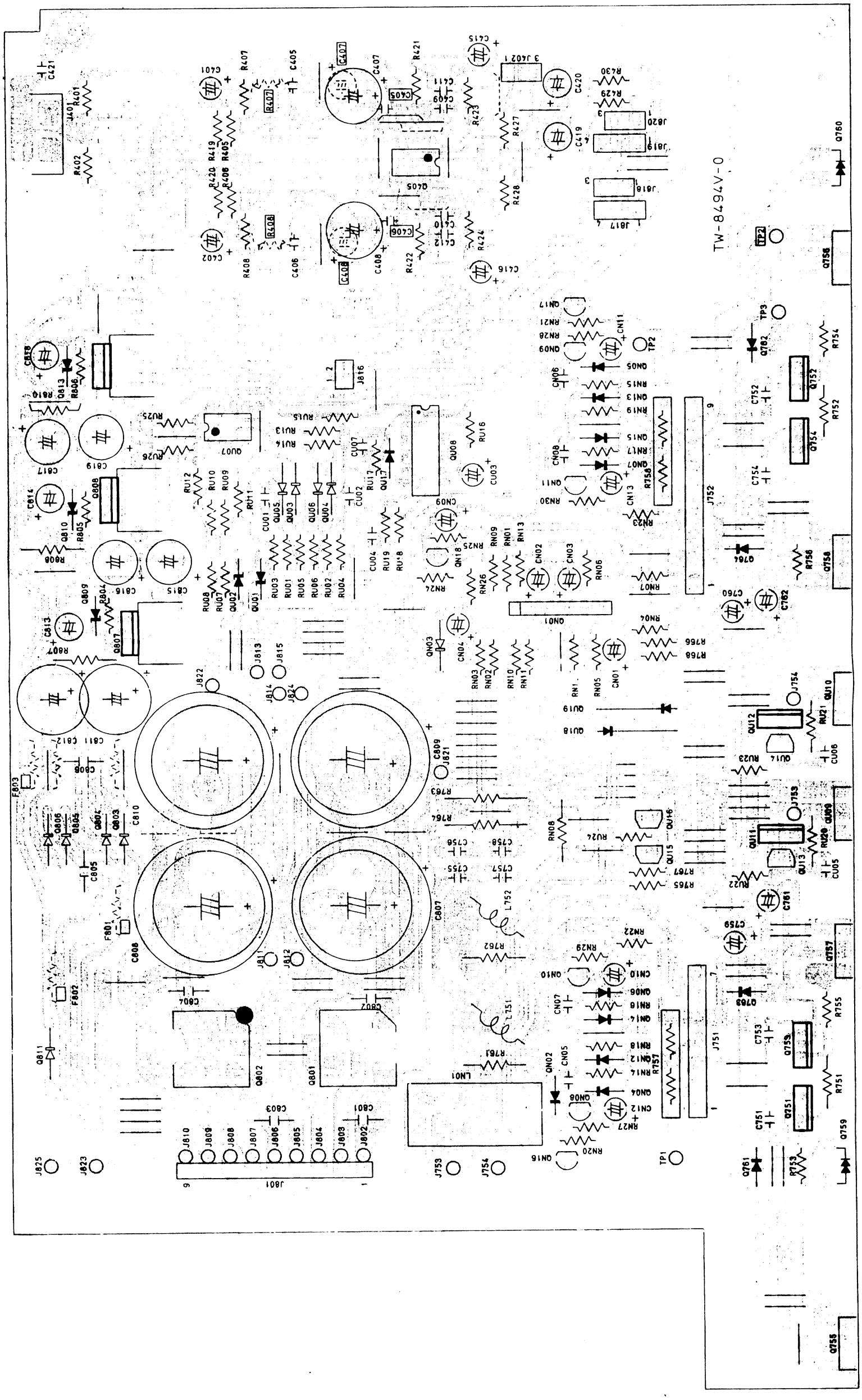


16. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

16.1 MAIN AMP. Assembly (P700) Schematic Diagrams and Component Location



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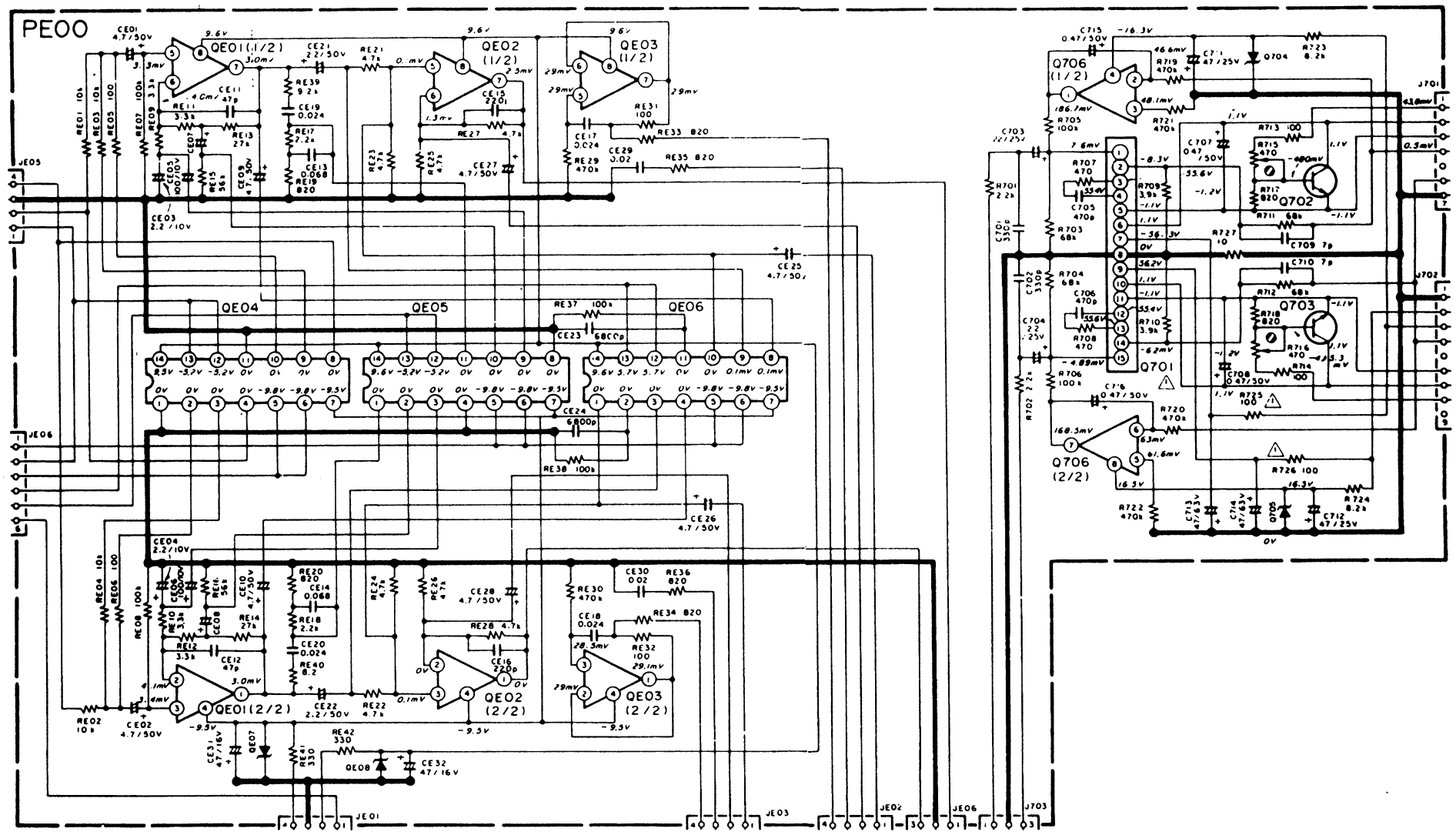
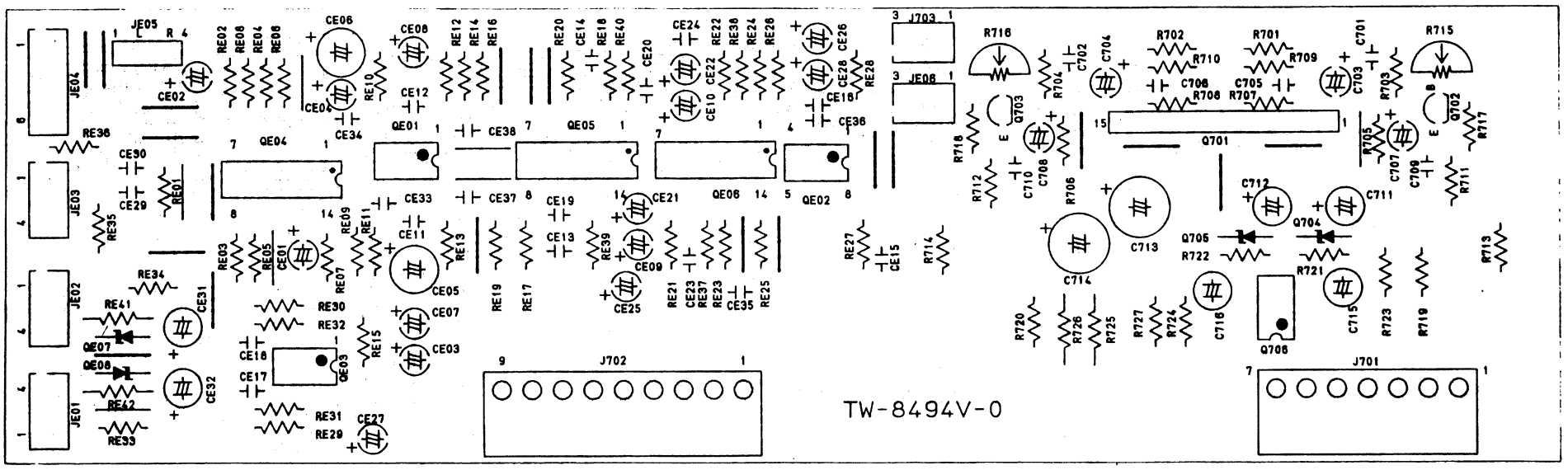
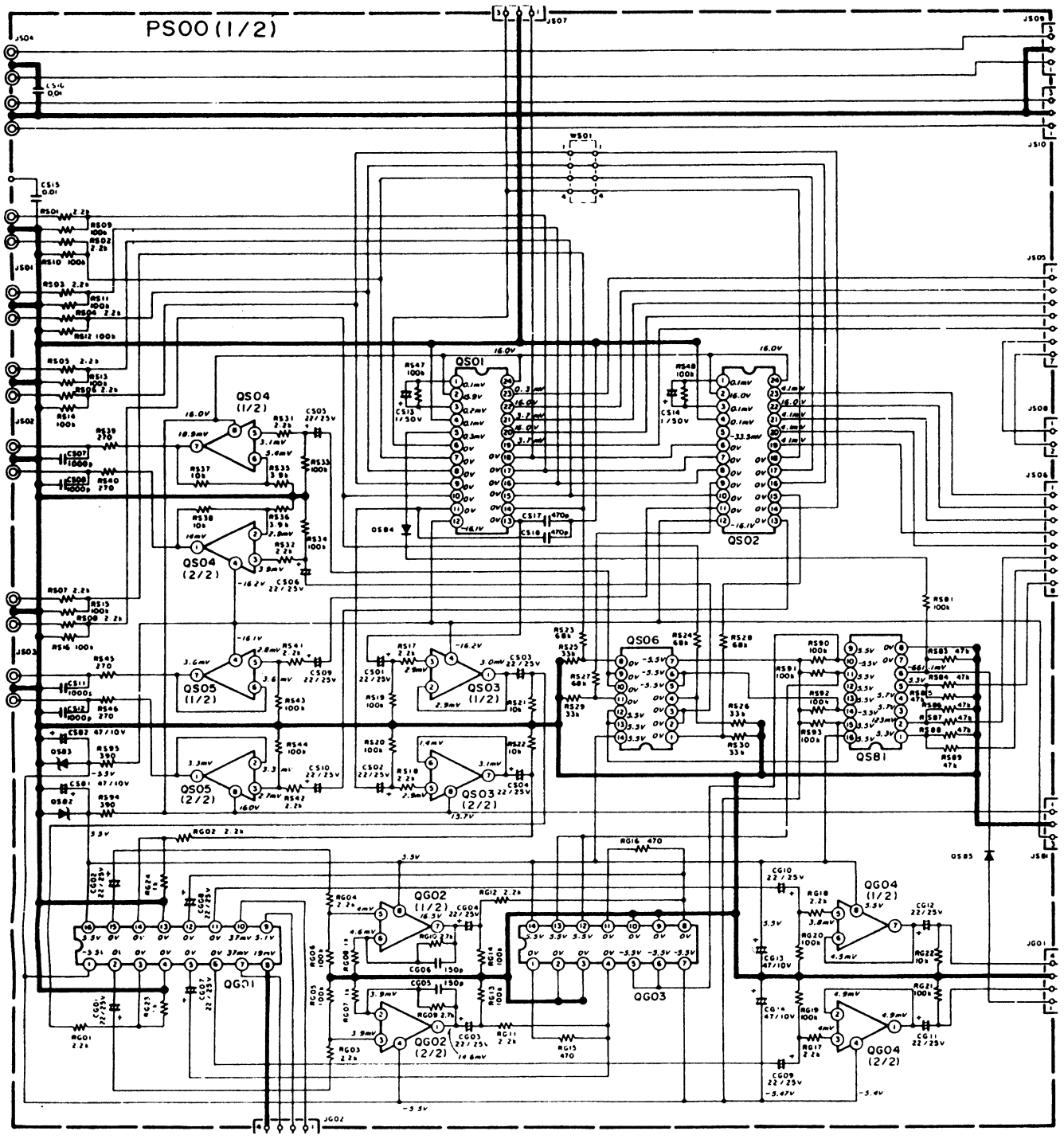
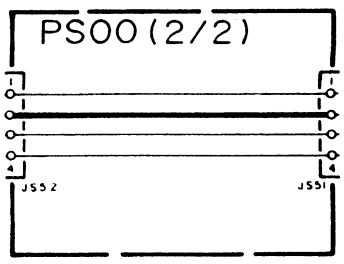
16.2 TONE CONTROL AMP. Assembly (PE00) Schematic Diagram and Component Locations

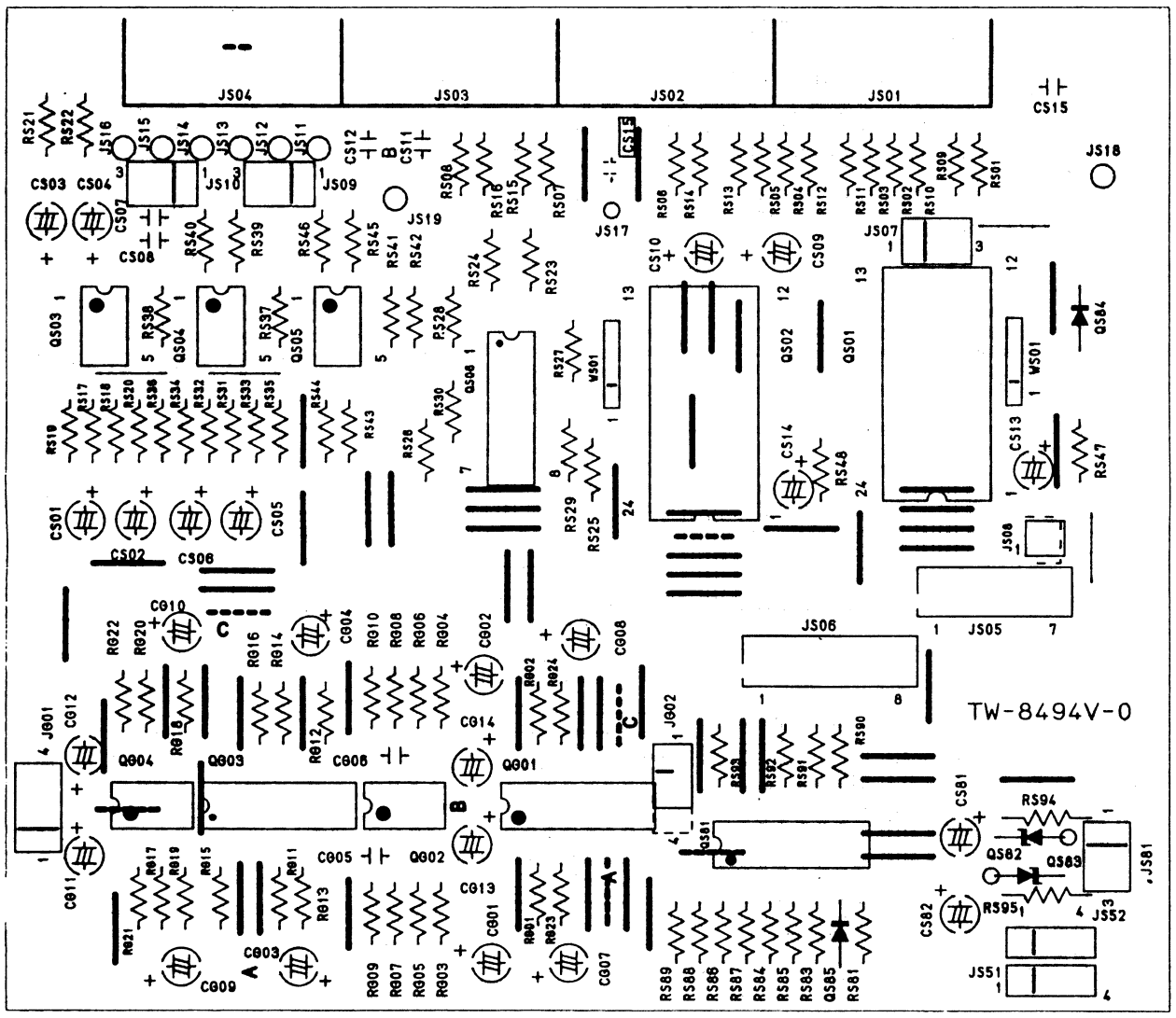




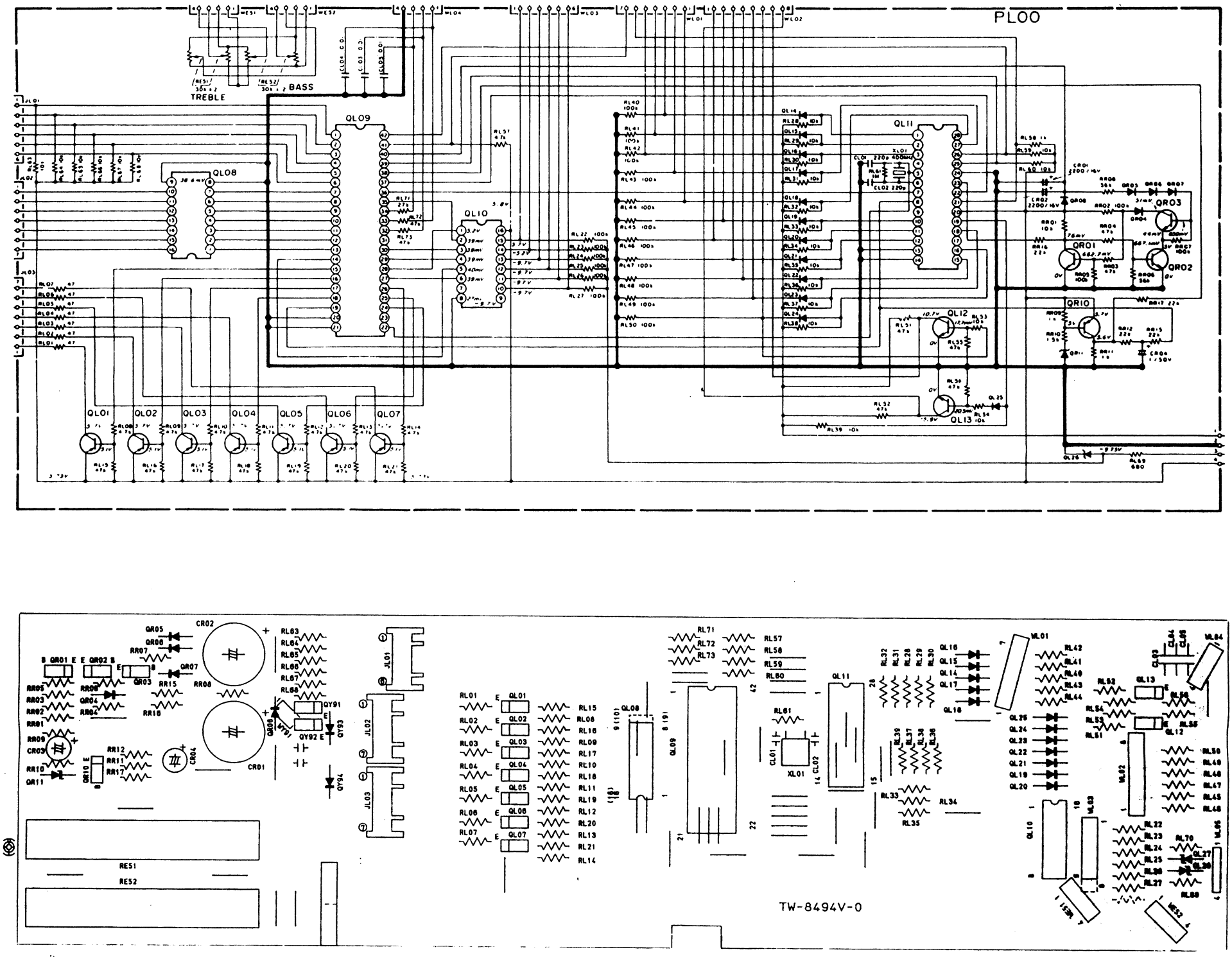
16.3 FUNCTION/VOLUME AMP. Assembly (PS00) Schematic Diagram and Component Locations



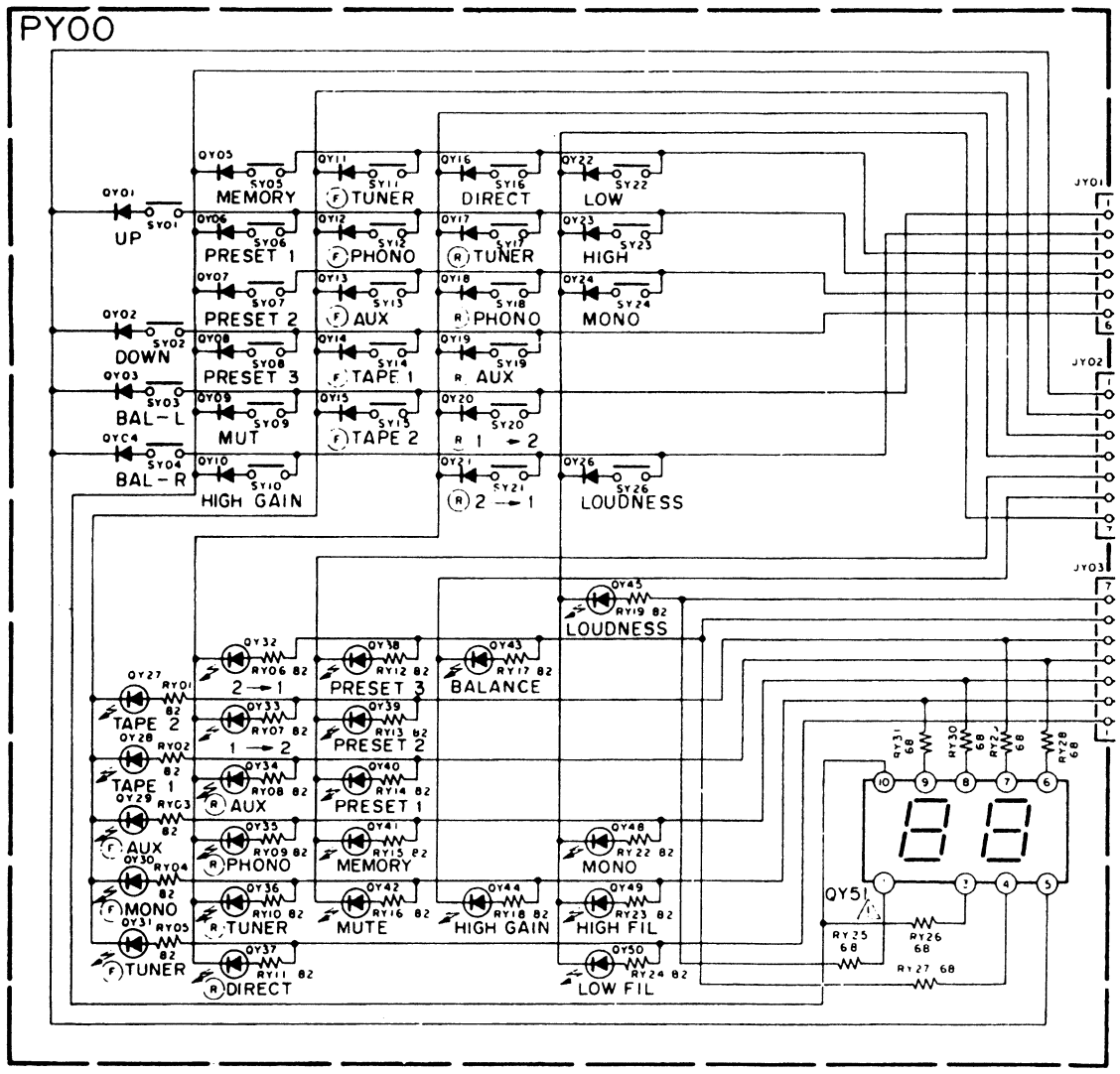


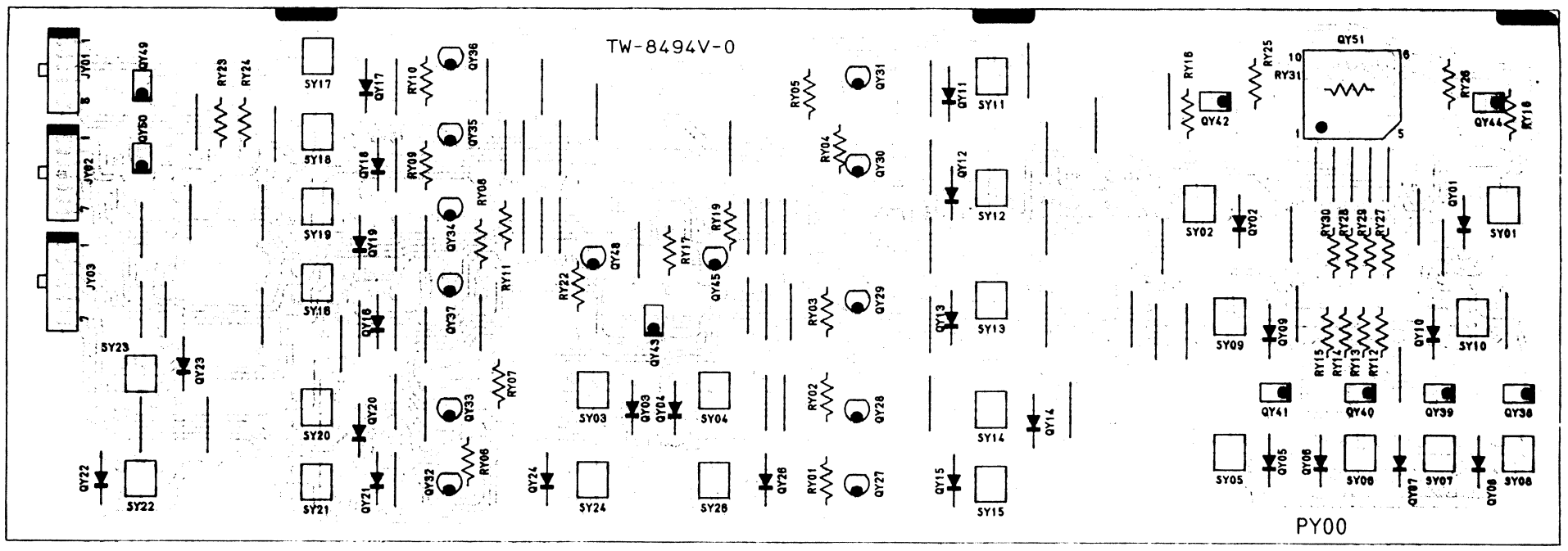


16.4 LOGIC CONTROL CIRCUIT Assembly (PL00) Schematic Diagram and Component Locations

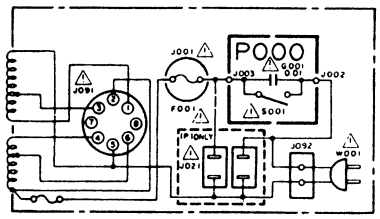


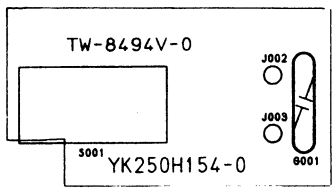
16.5 FRONT LED Swtich Assembly (PY00) Schematic Diagram and Component Locations



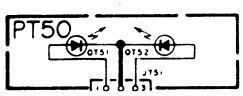


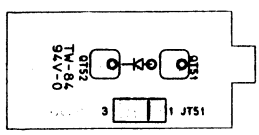
16.6 POWER Switch Assembly (PO00)
Schematic Diagram and Component Locations



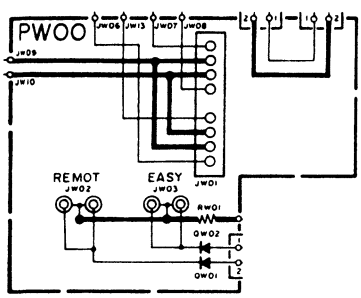


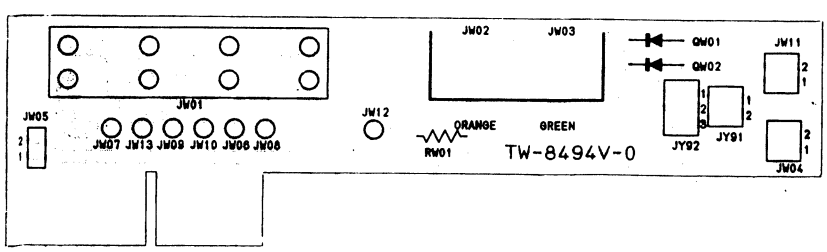
16.7 Speaker LED Assembly (PT50)
Schematic Diagram and Component Locations



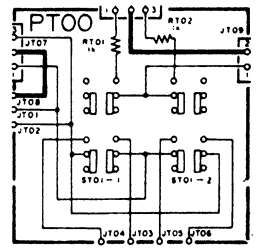


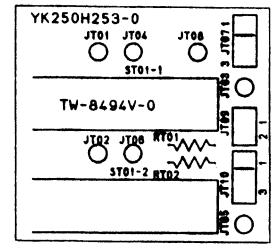
16.8 Speaker Output Assembly (PW00)
Schematic Diagram and Component Locations



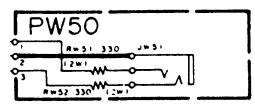


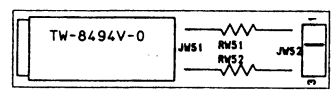
16.9 Speaker Switch Assembly (PT00)
Schematic Diagram and Component Locations



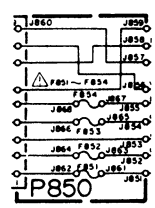


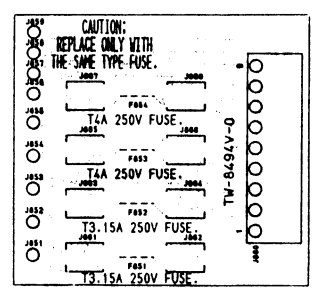
16.10 Head Phone Assembly (PW50)
Schematic Diagram and Component Locations





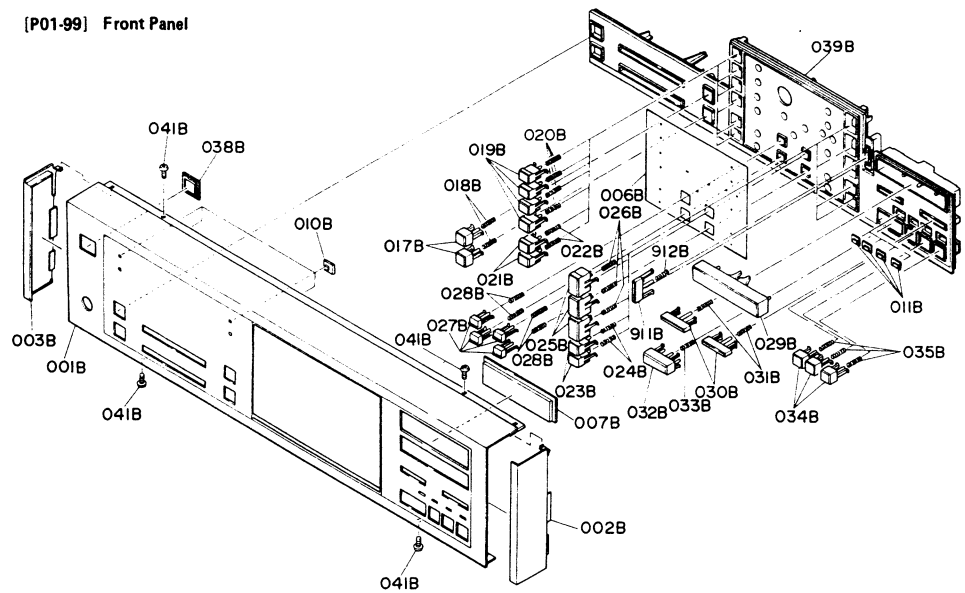
16.11 Fuse Assembly (P850)
Schematic Diagram and Component Locations





17. EXPLODED VIEW AND PARTS LIST

[P01-99] Front Panel

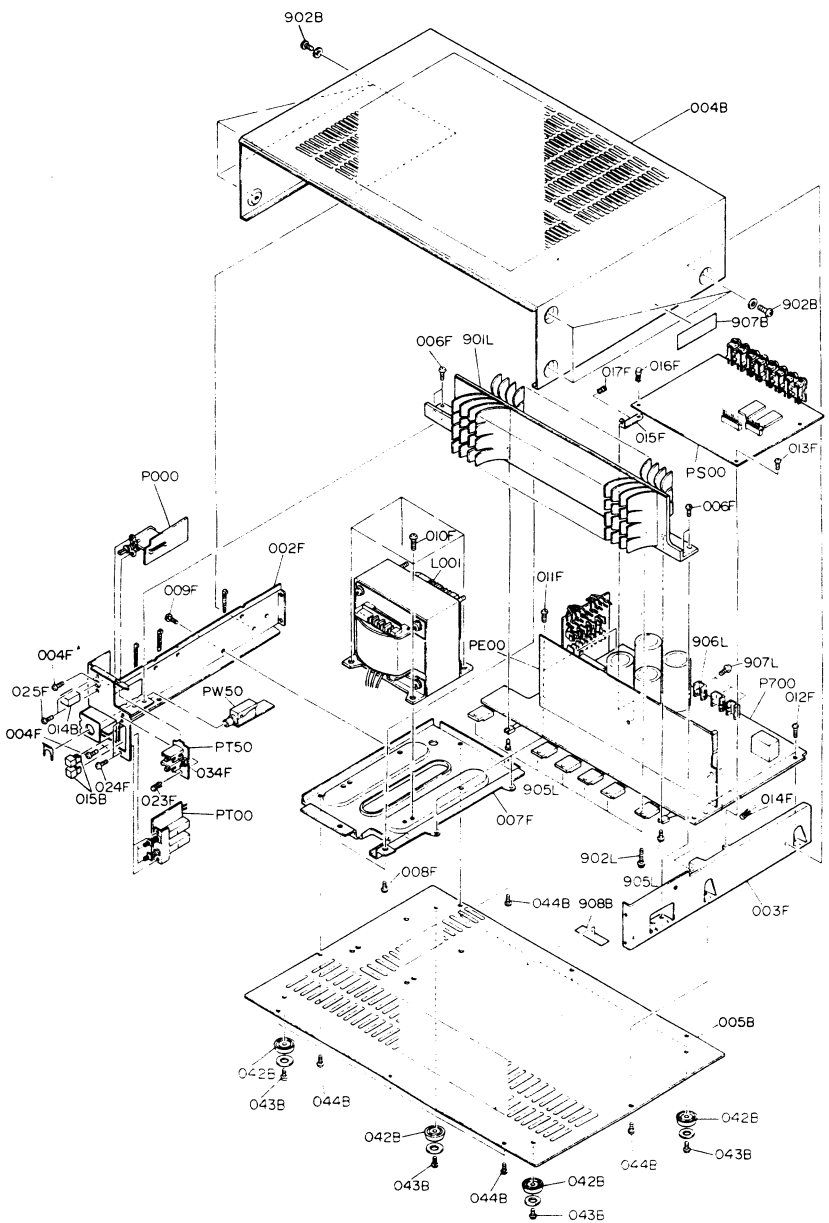


- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
A	1	1	1	249H063400	Front Panel Assembly
001B	1	1	1	249H063010	Escutcheon, Front Panel
002B	1	1	1	229H067010	Cap (Right)
003B	1	1	1	229H067020	Cap (Left)
006B	1	1	1	249H127010	Control Board
007B	1	1	1	249H158010	Window, Clear Plate
010B	4	4	4	125H158010	Window, Speaker/Filter
011B	4	4	4	249H355010	Lens, Memory
017B	2	2	2	249H154010	Knob, Filter Switch
018B	2	2	2	249H115010	Spring, Filter Knob
019B	4	4	4	420H154210	Knob, Rec Selector
020B	4	4	4	249H115010	Spring, Rec Selector Knob
021B	2	2	2	420H154210	Knob, Tape Copy
022B	2	2	2	249H115010	Spring, Tape Copy Knob
023B	2	2	2	420H154210	Knob, Tape Monitor
024B	2	2	2	249H115010	Spring, Tape Monitor Knob
025B	3	3	3	416H154220	Knob, Input Selector
026B	3	3	3	249H115010	Spring, Input Selector Knob
027B	4	4	4	141T154010	Knob, Mono/Loudness/Balance
028B	4	4	4	249H115010	Spring, Mono/Loudness/Balance Knob

REF. DESG.	Q'TY N	A	P	PART NO.	DESCRIPTION
029B	1	1	1	249H154030	Knob, Volume
030B	2	2	2	431H154010	Knob, Muting/Volume Shift
031B	2	2	2	132T115010	Spring, Muting/Vol. Shift Knob
032B	1	1	1	249H154020	Knob, Memory
033B	1	1	1	249H115010	Spring, Memory Knob
034B	3	3	3	249H154010	Knob, Volume Preset
035B	3	3	3	249H115010	Spring, Volume Preset Knob
038B	1	1	1	415H259210	Bushing, Power Switch
039B	1	1	1	249H259010	Bushing, Front
041B	4	4	4	5128030880	B.H. Tapped Screw B3 x 8

[P02-99] Lid and General Parts

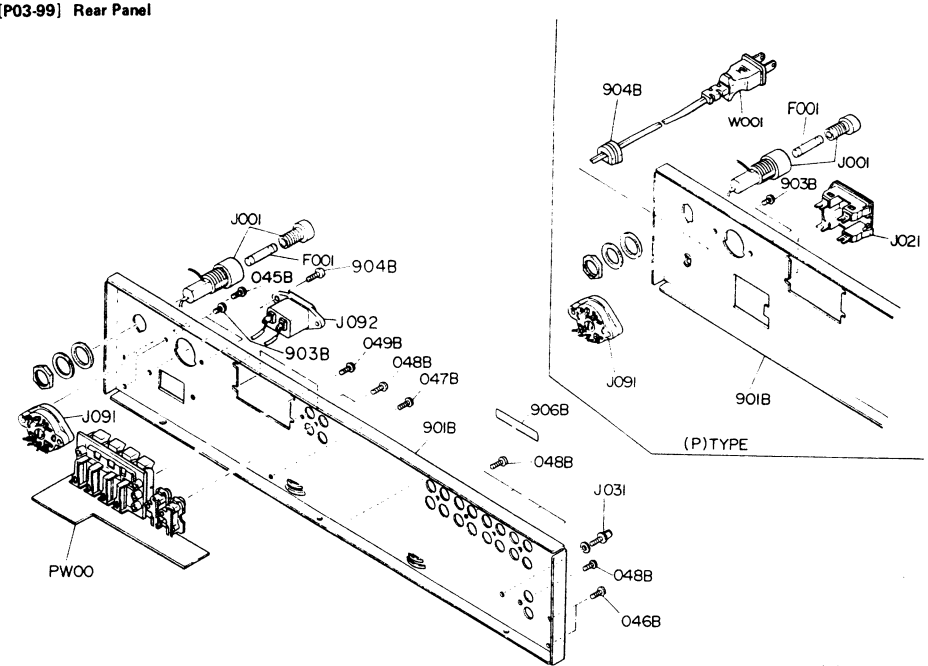


- (N): for Europe
- (A): for Australia
- (P): for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
004B	1	1	1	229H257010	Lid, Top Cover
005B	1	1	1	249H257010	Lid, Bottom Cover
014B	1	1	1	415H154210	Knob, Power
015B	2	2	2	241H154030	Knob, Speaker
042B	4	4	4	416H057010	Leg
043B	4	4	4	51280408U0	B.H. Tapped Screw B4 x 8
044B	8	8	8	51280308B0	B.H. Tapped Screw B3 x 8
902B	6	6	6	51260408U0	B.T. Screw B4 x 8
907B	1	1	1	2911861140	Label, Caution (Top)
908B	1	1	1	2911861110	Label, Caution (Bottom)

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
002F	1	1	1	249H126010	Stay, Left
003F	1	1	1	249H126020	Stay, Right
004F	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
006F	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
007F	1	1	1	249H004010	Table, Transformer
008F	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
009F	1	1	1	51280308B0	B.H. Tapped Screw B3 x 8
010F	4	4	4	51260408U0	B.T. Screw B4 x 8
011F	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
012F	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
013F	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
014F	1	1	1	2276005050	Clamper
015F	1	1	1	249H160020	Bracket
016F	1	1	1	2276005050	Clamper
017F	1	1	1	2276005050	Clamper
023F	1	1	1	2276005050	Clamper
024F	2	2	2	51100306A9	B.H.M. Screw B3 x 6
025F	2	2	2	51100306A9	B.H.M. Screw B3 x 6
034F	2	2	2	249H051020	Guide L.E.D. Speaker
901L	1	1	1	250H267010	Heat Sink
902L	6	6	6	51780312B0	B.T. Screw Transistor B3 x 12
905L	2	2	2	51260310B0	B.T. Screw
906L	3	3	3	250H267020	Heat Sink
907L	3	3	3	51280308B0	B.H. Tapped Screw B3 x 8
L001	1	1	1	TS19620030	Power Transformer

[P03-99] Rear Panel

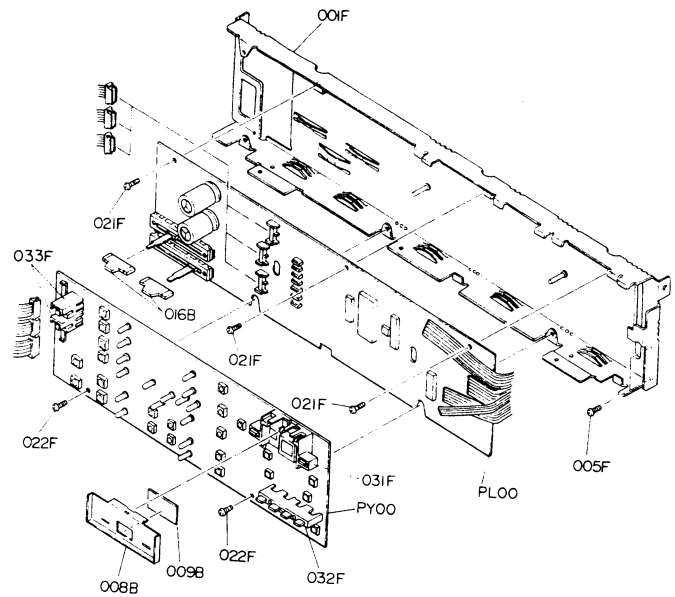


- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
045B	2	2	2	5128030880	B.H. Tapped Screw B3 x 8
046B	2	2	2	5128030880	B.H. Tapped Screw B3 x 8
047B	1	1	1	5128030880	B.H. Tapped Screw B3 x 8
048B	7	7	7	5128030880	B.H. Tapped Screw B3 x 8
049B	4	4	4	5128030880	B.H. Tapped Screw B3 x 8
901B	1	1		249H160210	Bracket, Rear Panel
901B			1	249H160230	Bracket, Rear Panel
903B	2	2	2	5128030880	B.H. Tapped Screw B3 x 8
904B	2	2		51870308U0	O.H.C. Tapped Screw
904B			1	1455259090	Bushing, AC Cord
906B	1	1	1	2112265010	Indicator, Serial No.

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
⚠F001	1	1		FS10140800	Fuse 1.4A
⚠F001			1	FS10315800	Fuse 3.15A
⚠F001			1	FS10140800	Fuse 1.4A (PG)
⚠ J001	1	1	1	YJ08000290	Jack, Fuse Holder
⚠ J021			1	YJ04001010	Jack, AC Outlet 2P
J031	1	1	1	YJ03010250	Terminal, Ground
⚠ J091	1	1		BY05080050	Volt, Selector
⚠ J091			1	BY05080040	Volt, Selector
⚠ J092	1	1		YP04000610	Plug Inlet
W001			1	YC01900070	A.C. Power Cord

[P04-99] Front Chassis

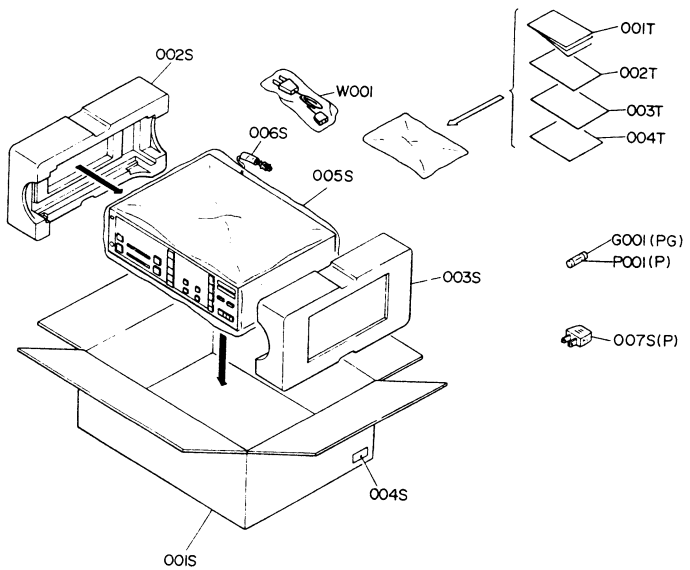


- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
008B	1	1	1	249H302010	Dial Plate, Volume Display
009B	1	1	1	013H158000	Window, Volume Display
016B	1	1	1	141T154050	Knob, Tone

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
001F	1	1	1	249H105010	Chassis, Front
005F	2	2	2	5128030880	B.H. Tapped Screw B3 x 8
021F	3	3	3	5128030880	B.H. Tapped Screw B3 x 8
022F	2	2	2	5128030880	B.H. Tapped Screw B3 x 8
031F	1	1	1	249H104010	Retainer, Volume Display
032F	1	1	1	249H051010	Guide, Led Menory
033F	2	2	2	249H051020	Guide, Led Filters

[H01-99] Packing Materials



REF. DESG.	Q'TY N	A	P	PART NO.	DESCRIPTION
001S	1	1		249H801010	Packing Case
001S			1	249H801030	Packing Case
002S	1	1	1	229H809010	Cushion, Left
003S	1	1	1	229H809020	Cushion, Right
004S	4			9526019060	Serial No. Card
004S		4		9526019030	Serial No. Card
004S			4	9526019050	Serial No. Card
005S	1	1	1	9090808030	Polyethy Sheet
006S			1	2918107370	Sheet AC Cord
007S			1	YJ04000240	Jack Socket
001T	1	1	1	250H851310	Instructions
002T	1	1	1	249H851320	Instructions Spec.
003T	1			249H856010	Circuit Diagram
003T		1		9631000090	Guarantee Card
003T			1	416H854010	Guarantee Card
004T			1	3435851210	Instructions

REF. DESG.	Q'TY N	A	P	PART NO.	DESCRIPTION
P001			1	FS10140800	Fuse 220V
G001			1	FS10315800	Fuse 120V (PG)
W001	1			ZC01805030	A.C. Power Cord
W001		1		ZC02006030	A.C. Power Cord

- (N):for Europe
- (A):for Australia
- (P):for PX

18. ELECTRICAL PARTS LIST

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
					PE00-TONE CONTROL CIRCUIT BOARD
PE00	1	1	1	YK250H1510	P.W. Board, Tone Control
	1	1	1	ZZ250H1510	P.W. Board Assembly
					PE00-CAPACITORS
C701	1	1	1	DF15331550	Film 330pF ±5%
C702	1	1	1	DF15331550	Film 330pF ±5%
C703	1	1	1	EA22602530	Elect 22μF 25V
C704	1	1	1	EA22602530	Elect 22μF 25V
C705	1	1	1	DK16471300	Ceramic 470pF ±10%
C706	1	1	1	DK16471300	Ceramic 470pF ±10%
C707	1	1	1	EA47405030	Elect 0.47μF 50V
C708	1	1	1	EA47405030	Elect 0.47μF 50V
C709	1	1	1	DD11100370	Ceramic 10pF
C710	1	1	1	DD11100370	Ceramic 10pF
C711	1	1	1	EA47602530	Elect 47μF 25V
C712	1	1	1	EA47602530	Elect 47μF 25V
C713	1	1	1	EA47606330	Elect 47μF 63V
C714	1	1	1	EA47606330	Elect 47μF 63V
C715	1	1	1	EQ47405030	Elect 0.47μF 50V
C716	1	1	1	EQ47405030	Elect 0.47μF 50V
CE01	1	1	1	EA47505030	Elect 4.7μF 50V
CE02	1	1	1	EA47505030	Elect 4.7μF 50V
CE03	1	1	1	EA22505030	Elect 2.2μF 50V
CE04	1	1	1	EA22505030	Elect 2.2μF 50V
CE05	1	1	1	EA10701030	Elect 100μF 10V
CE06	1	1	1	EA10701030	Elect 100μF 10V
CE07	1	1	1	EA22505030	Elect 2.2μF 50V
CE08	1	1	1	EA22505030	Elect 2.2μF 50V
CE09	1	1	1	EA47505030	Elect 4.7μF 50V
CE10	1	1	1	EA47505030	Elect 4.7μF 50V
CE11	1	1	1	DD15470370	Ceramic 47pF ±5%
CE12	1	1	1	DD15470370	Ceramic 47pF ±5%
CE13	1	1	1	DF15683310	Film 0.068μF ±5%
CE14	1	1	1	DF15683310	Film 0.068μF ±5%
CE15	1	1	1	DK16221300	Ceramic 220pF ±10%
CE16	1	1	1	DK16221300	Ceramic 220pF ±10%
CE17	1	1	1	DF15243310	Film 0.024μF ±5%
CE18	1	1	1	DF15243310	Film 0.024μF ±5%
CE19	1	1	1	DF15243310	Film 0.024μF ±5%
CE20	1	1	1	DF15243310	Film 0.024μF ±5%
CE21	1	1	1	EA22505030	Elect 2.2μF 50V
CE22	1	1	1	EA22505030	Elect 2.2μF 50V
CE23	1	1	1	DF15682310	Film 6800pF ±5%
CE24	1	1	1	DF15682310	Film 6800pF ±5%
CE25	1	1	1	EA47505030	Elect 4.7μF 50V
CE26	1	1	1	EA47505030	Elect 4.7μF 50V
CE27	1	1	1	EA47505030	Elect 4.7μF 50V
CE28	1	1	1	EA47505030	Elect 4.7μF 50V
CE29	1	1	1	DF15203310	Film 0.02μF ±5%
CE30	1	1	1	DF15203310	Film 0.02μF ±5%
CE31	1	1	1	EA47601630	Elect 47μF 16V
CE32	1	1	1	EA47601630	Elect 47μF 16V
					PE00-RESISTORS (All Resistors are ±5% & ¼W)
R701	1	1	1	GD05222140	2.2kΩ
R702	1	1	1	GD05222140	2.2kΩ
R703	1	1	1	GD05683140	68kΩ
R704	1	1	1	GD05683140	68kΩ
R705	1	1	1	GD05104140	100kΩ
R706	1	1	1	GD05104140	100kΩ
R707	1	1	1	GD05471140	470Ω
R708	1	1	1	GD05471140	470Ω
R709	1	1	1	GD05392140	3.9kΩ
R710	1	1	1	GD05392140	3.9kΩ

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
R711	1	1	1	GD05683140	68kΩ
R712	1	1	1	GD05683140	68kΩ
R713	1	1	1	GD05101140	100Ω
R714	1	1	1	GD05101140	100Ω
R715	1	1	1	RA04710040	Triming 470Ω
R716	1	1	1	RA04710040	Triming 470Ω
R717	1	1	1	GD05821140	820Ω
R718	1	1	1	GD05821140	820Ω
R719	1	1	1	GD05474140	470kΩ
R720	1	1	1	GD05474140	470kΩ
R721	1	1	1	GD05474140	470kΩ
R722	1	1	1	GD05474140	470kΩ
R723	1	1	1	GG05822140	8.2kΩ
R724	1	1	1	GG05822140	8.2kΩ
⚠R725	1	1	1	RF05101120	Fusible 100Ω ½W
⚠R726	1	1	1	RF05101120	Fusible 100Ω ½W
R727	1	1	1	GG05100140	10Ω
RE01	1	1	1	GD05103140	10kΩ
RE02	1	1	1	GD05103140	10kΩ
RE03	1	1	1	GD05103140	10kΩ
RE04	1	1	1	GD05103140	10kΩ
RE05	1	1	1	GD05101140	100Ω
RE06	1	1	1	GD05101140	100Ω
RE07	1	1	1	GD05104140	100kΩ
RE08	1	1	1	GD05104140	100kΩ
RE09	1	1	1	GD05332140	3.3kΩ
RE10	1	1	1	GD05332140	3.3kΩ
RE11	1	1	1	GD05332140	3.3kΩ
RE12	1	1	1	GD05332140	3.3kΩ
RE13	1	1	1	GD05273140	27kΩ
RE14	1	1	1	GD05273140	27kΩ
RE15	1	1	1	GD05563140	56kΩ
RE16	1	1	1	GD05563140	56kΩ
RE17	1	1	1	GD05222140	2.2kΩ
RE18	1	1	1	GD05222140	2.2kΩ
RE19	1	1	1	GD05821140	820Ω
RE20	1	1	1	GD05821140	820Ω
RE21	1	1	1	GD05472140	4.7kΩ
RE22	1	1	1	GD05472140	4.7kΩ
RE23	1	1	1	GD05472140	4.7kΩ
RE24	1	1	1	GD05472140	4.7kΩ
RE25	1	1	1	GD05472140	4.7kΩ
RE26	1	1	1	GD05472140	4.7kΩ
RE27	1	1	1	GD05472140	4.7kΩ
RE28	1	1	1	GD05472140	4.7kΩ
RE29	1	1	1	GD05474140	470kΩ
RE30	1	1	1	GD05474140	470kΩ
RE31	1	1	1	GD05101140	100Ω
RE32	1	1	1	GD05101140	100Ω
RE33	1	1	1	GD05821140	820Ω
RE34	1	1	1	GD05821140	820Ω
RE35	1	1	1	GD05821140	820Ω
RE36	1	1	1	GD05821140	820Ω
RE37	1	1	1	GD05104140	100kΩ
RE38	1	1	1	GD05104140	100kΩ
RE39	1	1	1	GD05822140	8.2kΩ
RE40	1	1	1	GD05822140	8.2kΩ
RE41	1	1	1	GG05331120	330Ω
RE42	1	1	1	GG05331120	330Ω

• (N):for Europe
• (A):for Australia
• (P):for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
					PE00-SEMICONDUCTORS
⚠Q701	1	1	1	HC10129030	IC STK3062IIA
Q702	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
Q703	1	1	1	HT327852C0	Transistor 2SC2785 (HF or EF)
Q704	1	1	1	HD30014010	Zener HZ16L
Q705	1	1	1	HD30014010	Zener HZ16L
Q706	1	1	1	HC10007090	IC NJM4560D
QE01	1	1	1	HC10021090	IC NJM4560D-D
QE02	1	1	1	HC10021090	IC NJM4560D-D
QE03	1	1	1	HC10003090	IC NJM4558D
QE04	1	1	1	HC40660080	IC IC-4066
QE05	1	1	1	HC40660080	IC IC-4066
QE06	1	1	1	HC40660080	IC IC-4066
QE07	1	1	1	HD30045010	Zener HZ9L-1C
QE08	1	1	1	HD30045010	Zener HZ9L-1C
					PE00-MISCELLANEOUS
JE01	1	1	1	YJ06002440	Jack (4P)
JE02	1	1	1	YJ06002440	Jack (4P)
JE03	1	1	1	YJ06002440	Jack (4P)
JE04	1	1	1	YJ06002450	Jack (6P)
JE05	1	1	1	YJ07000860	Jack (4P)
JE06	1	1	1	YJ06002430	Jack (3P)
J701	1	1	1	YJ06001260	Jack (7P)
J702	1	1	1	YJ06001430	Jack (9P)
					PS00-FUNCTION/VOLUME CIRCUIT BOARD
PS00	1	1	1	YK250H1520	P.W. Board, Function/Volume
	1	1	1	ZZ250H1520	P.W. Board Assembly
					PS00-CAPACITORS
CG01	1	1	1	EA22602530	Elect 22μF 25V
CG02	1	1	1	EA22602530	Elect 22μF 25V
CG03	1	1	1	EA22602530	Elect 22μF 25V
CG04	1	1	1	EA22602530	Elect 22μF 25V
CG05	1	1	1	DK16151300	Ceramic 150pF ±10%
CG06	1	1	1	DK16151300	Ceramic 150pF ±10%
CG07	1	1	1	EA22602530	Elect 22μF 25V
CG08	1	1	1	EA22602530	Elect 22μF 25V
CG09	1	1	1	EA22602530	Elect 22μF 25V
CG10	1	1	1	EA22602530	Elect 22μF 25V
CG11	1	1	1	EA22602530	Elect 22μF 25V
CG12	1	1	1	EA22602530	Elect 22μF 25V
CG13	1	1	1	EA47601030	Elect 47μF 10V
CG14	1	1	1	EA47601030	Elect 47μF 10V
CS01	1	1	1	EA22602530	Elect 22μF 25V
CS02	1	1	1	EA22602530	Elect 22μF 25V
CS03	1	1	1	EA22602530	Elect 22μF 25V
CS04	1	1	1	EA22602530	Elect 22μF 25V
CS05	1	1	1	EA22602530	Elect 22μF 25V
CS06	1	1	1	EA22602530	Elect 22μF 25V
CS07	1	1	1	DK16102300	Ceramic 1000pF ±10%
CS08	1	1	1	DK16102300	Ceramic 1000pF ±10%
CS09	1	1	1	EA22602530	Elect 22μF 25V
CS10	1	1	1	EA22602530	Elect 22μF 25V

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
CS11	1	1	1	DK16102300	Ceramic 1000pF ±10%
CS12	1	1	1	DK16102300	Ceramic 1000pF ±10%
CS13	1	1	1	EA10505030	Elect 1μF 50V
CS14	1	1	1	EA10505030	Elect 1μF 50V
CS15	1	1	1	DK17103300	Ceramic 0.01μF ±20%
CS16	1	1	1	DK18103310	Ceramic 0.01μF ±20%
CS17	1	1	1	DK16471300	Ceramic 470pF ±10%
CS18	1	1	1	DK16471300	Ceramic 470pF ±10%
CS81	1	1	1	EA47601030	Elect 47μF 10V
CS82	1	1	1	EA47601030	Elect 47μF 10V
					PS00-RESISTORS (All Resistors are ±5% & ¼W)
RG01	1	1	1	GD05222140	2.2kΩ
RG02	1	1	1	GD05222140	2.2kΩ
RG03	1	1	1	GD05222140	2.2kΩ
RG04	1	1	1	GD05222140	2.2kΩ
RG05	1	1	1	GD05104140	100kΩ
RG06	1	1	1	GD05104140	100kΩ
RG07	1	1	1	GD05102140	1kΩ
RG08	1	1	1	GD05102140	1kΩ
RG09	1	1	1	GD05272140	2.7kΩ
RG10	1	1	1	GD05272140	2.7kΩ
RG11	1	1	1	GD05222140	2.2kΩ
RG12	1	1	1	GD05222140	2.2kΩ
RG13	1	1	1	GD05104140	100kΩ
RG14	1	1	1	GD05104140	100kΩ
RG15	1	1	1	GD05471140	470Ω
RG16	1	1	1	GD05471140	470Ω
RG17	1	1	1	GD05222140	2.2kΩ
RG18	1	1	1	GD05222140	2.2kΩ
RG19	1	1	1	GD05104140	100kΩ
RG20	1	1	1	GD05104140	100kΩ
RG21	1	1	1	GD05103140	10kΩ
RG22	1	1	1	GD05103140	10kΩ
RG23	1	1	1	GD05102140	1kΩ
RG24	1	1	1	GD05102140	1kΩ
RS01	1	1	1	GD05222140	2.2kΩ
RS02	1	1	1	GD05222140	2.2kΩ
RS03	1	1	1	GD05222140	2.2kΩ
RS04	1	1	1	GD05222140	2.2kΩ
RS05	1	1	1	GD05222140	2.2kΩ
RS06	1	1	1	GD05222140	2.2kΩ
RS07	1	1	1	GD05222140	2.2kΩ
RS08	1	1	1	GD05222140	2.2kΩ
RS09	1	1	1	GD05104140	100kΩ
RS10	1	1	1	GD05104140	100kΩ
RS11	1	1	1	GD05104140	100kΩ
RS12	1	1	1	GD05104140	100kΩ
RS13	1	1	1	GD05104140	100kΩ
RS14	1	1	1	GD05104140	100kΩ
RS15	1	1	1	GD05104140	100kΩ
RS16	1	1	1	GD05104140	100kΩ
RS17	1	1	1	GD05222140	2.2kΩ
RS18	1	1	1	GD05222140	2.2kΩ
RS19	1	1	1	GD05104140	100kΩ
RS20	1	1	1	GD05104140	100kΩ
RS21	1	1	1	GD05103140	10kΩ
RS22	1	1	1	GD05103140	10kΩ
RS23	1	1	1	GD05683140	68kΩ
RS24	1	1	1	GD05683140	68kΩ
RS25	1	1	1	GD05333140	33kΩ
RS26	1	1	1	GD05333140	33kΩ
RS27	1	1	1	GD05683140	68kΩ
RS28	1	1	1	GD05683140	68kΩ
RS29	1	1	1	GD05333140	33kΩ
RS30	1	1	1	GD05333140	33kΩ

• (N):for Europe
• (A):for Australia
• (P):for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
RS31	1	1	1	GD05222140	2.2kΩ
RS32	1	1	1	GD05222140	2.2kΩ
RS33	1	1	1	GD05104140	100kΩ
RS34	1	1	1	GD05104140	100kΩ
RS35	1	1	1	GD05392140	3.9kΩ
RS36	1	1	1	GD05392140	3.9kΩ
RS37	1	1	1	GD05103140	10kΩ
RS38	1	1	1	GD05103140	10kΩ
RS39	1	1	1	GD05271140	270Ω
RS40	1	1	1	GD05271140	270Ω
RS41	1	1	1	GD05222140	2.2kΩ
RS42	1	1	1	GD05222140	2.2kΩ
RS43	1	1	1	GD05104140	100kΩ
RS44	1	1	1	GD05104140	100kΩ
RS45	1	1	1	GD05271140	270Ω
RS46	1	1	1	GD05271140	270Ω
RS47	1	1	1	GD05104140	100kΩ
RS48	1	1	1	GD05104140	100kΩ
RS81	1	1	1	GD05104140	100kΩ
RS83	1	1	1	GD05473140	47kΩ
RS84	1	1	1	GD05473140	47kΩ
RS85	1	1	1	GD05473140	47kΩ
RS86	1	1	1	GD05154140	150kΩ
RS87	1	1	1	GD05473140	47kΩ
RS88	1	1	1	GD05473140	47kΩ
RS89	1	1	1	GD05473140	47kΩ
RS90	1	1	1	GD05104140	100kΩ
RS91	1	1	1	GD05104140	100kΩ
RS92	1	1	1	GD05104140	100kΩ
RS93	1	1	1	GD05104140	100kΩ
RS94	1	1	1	GG05391120	390Ω ½W
RS95	1	1	1	GG05391120	390Ω ½W
QG01	1	1	1	HC10092050	IC TC9154P
QG02	1	1	1	HC10021090	IC NTM4560D-D
QG03	1	1	1	HC40660080	IC IC-4066
QG04	1	1	1	HC10021090	IC NJM4560D-D
					PS00-SEMICONDUCTORS
QS01	1	1	1	HC10091050	IC TC9152P
QS02	1	1	1	HC10090050	IC TC9151P
QS03	1	1	1	HC10021090	IC NJM4560DD
QS04	1	1	1	HC10021090	IC NJM4560DD
QS05	1	1	1	HC10021090	IC NJM4560DD
QS06	1	1	1	HC40660080	IC IC-4066
QS81	1	1	1	HC10048050	IC TC50668P
QS82	1	1	1	HD30036010	Zener HZ6L
QS83	1	1	1	HD30036010	Zener HZ6L
QS84	1	1	1	HD20001000	Diode 1S1555
QS85	1	1	1	HD20001000	Diode 1S1555
					PS00-MISCELLANEOUS
JG01	1	1	1	YJ07000870	Jack HBRB4S-1J Output
JG02	1	1	1	YJ07000870	Jack HBRB4S-1J VR-Control
JS01	1	1	1	YT02040470	Terminal, RCA Pin Jack
JS02	1	1	1	YT02040470	Terminal, RCA Pin Jack
JS03	1	1	1	YT02040470	Terminal, RCA Pin Jack
JS04	1	1	1	YT02040470	Terminal, RCA Pin Jack
JS05	1	1	1	YJ06002460	Jack Function Control
JS06	1	1	1	YJ06002270	Jack REC Out Control
JS07	1	1	1	YJ07000860	Jack, Phono Input
JS08	1	1	1	YJ07000850	Jack, Remote Control
JS09	1	1	1	YJ07000860	Jack, Pre Output
JS10	1	1	1	YJ07000860	Jack, Main Input

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
JS11	1	1	1	YQ01000040	Plug, Shote
JS12	1	1	1	YQ01000040	Plug, Shote
JS51	1	1	1	YJ07000870	Jack, HBRB4S-1J Jumper
JS52	1	1	1	YJ07000870	Jack, HBRB4S-1J Jumper
JS81	1	1	1	YJ07000860	Jack, HBRB3S-1J Power
					PW00-SPEAKER OUTPUT CIRCUIT BOARD
PW00	1	1	1	YK250H1530	P.W. Board, Speaker Output
	1	1	1	ZZ250H1530	P.W. Board Assembly
					PW00-RESISTORS (All Resistors are ±5% & ¼W)
PW01	1	1	1	GD05100140	10Ω
					PW00-SEMICONDUCTORS
QW01	1	1	1	HD20001000	Diode 1S1555
QW02	1	1	1	HD20001000	Diode 1S1555
					PW00-MISCELLANEOUS
JW01	1	1	1	YT03080010	Terminal (8P) Speaker Out
JW02	1	1	1	YT02020390	Terminal (2P) Remote Control
JW03	1	1	1	YT02020400	Terminal (2P) Easy Control
JW04	1	1	1	YJ07000850	Jack (2P) 5V in
JW05	1	1	1	YJ07000850	Jack (2P) 5V to L.E.D.
JW11	1	1	1	YJ07000850	Jack (RP) Easy/Remote
					PO00-POWER SWITCH CIRCUIT BOARD
PO00	1	1	1	YK250H1540	P.W. Board, Power Switch
	1	1	1	ZZ250H1540	P.W. Board Assembly
					PO00-CAPACITORS
⚠G001	1	1	1	DK18103840	Ceramic 0.01μF
					PO00-MISCELLANEOUS
⚠S001		1	1	SP01010390	Push Switch, Power
					PL00-LOGIC CONTROL CIRCUIT BOARD
PL00	1	1	1	YK250H2510	P.W. Board, Logic Control
	1	1	1	ZZ250H2510	P.W. Board Assembly
					PL00-CAPACITORS
CL01	1	1	1	DK16221300	Ceramic 220pF
CL02	1	1	1	DK16221300	Ceramic 220pF
CL03	1	1	1	DA17103010	Ceramic 0.01μF
CL04	1	1	1	DA17103010	Ceramic 0.01μF
CL05	1	1	1	DA17103010	Ceramic 0.01μF
CR01	1	1	1	EA22801630	Elect 2200μF 16V
CR02	1	1	1	EA22801630	Elect 2200μF 16V
CR04	1	1	1	EA10505030	Elect 1μF 50V

• (N):for Europe
• (A):for Australia
• (P):for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
					PL00-RESISTORS
					(All Resistors are ±5% & ¼W)
RE51	1	1	1	RS03030010	Variable 30kΩ Treble
RE52	1	1	1	RS03030010	Variable 30kΩ Bass
RL01	1	1	1	GD05470140	47Ω
RL02	1	1	1	GD05470140	47Ω
RL03	1	1	1	GD05470140	47Ω
RL04	1	1	1	GD05470140	47Ω
RL05	1	1	1	GD05470140	47Ω
RL06	1	1	1	GD05470140	47Ω
RL07	1	1	1	GD05470140	47Ω
RL08	1	1	1	GD05472140	4.7kΩ
RL09	1	1	1	GD05472140	4.7kΩ
RL10	1	1	1	GD05472140	4.7kΩ
RL11	1	1	1	GD05472140	4.7kΩ
RL12	1	1	1	GD05472140	4.7kΩ
RL13	1	1	1	GD05472140	4.7kΩ
RL14	1	1	1	GD05472140	4.7kΩ
RL15	1	1	1	GD05473140	47kΩ
RL16	1	1	1	GD05473140	47kΩ
RL17	1	1	1	GD05473140	47kΩ
RL18	1	1	1	GD05473140	47kΩ
RL19	1	1	1	GD05473140	47kΩ
RL20	1	1	1	GD05473140	47kΩ
RL21	1	1	1	GD05473140	47kΩ
RL22	1	1	1	GD05104140	100kΩ
RL23	1	1	1	GD05104140	100kΩ
RL24	1	1	1	GD05104140	100kΩ
RL25	1	1	1	GD05104140	100kΩ
RL26	1	1	1	GD05104140	100kΩ
RL27	1	1	1	GD05104140	100kΩ
RL28 ~ RL39	12	12	12	GD05103140	10kΩ
RL40 ~ RL50	11	11	11	GD05104140	100kΩ
RL51	1	1	1	GD05473140	47kΩ
RL52	1	1	1	GD05473140	47kΩ
RL53	1	1	1	GD05103140	10kΩ
RL54	1	1	1	GD05103140	10kΩ
RL55	1	1	1	GD05473140	47kΩ
RL56	1	1	1	GD05473140	47kΩ
RL57	1	1	1	GD05472140	4.7kΩ
RL58	1	1	1	GD05102140	1kΩ
RL59	1	1	1	GD05103140	10kΩ
RL60	1	1	1	GD05103140	10kΩ
RL61	1	1	1	GD05105140	1MΩ
RL63	1	1	1	GD05103140	10kΩ
RL64	1	1	1	GD05103140	10kΩ
RL65	1	1	1	GD05103140	10kΩ
RL66	1	1	1	GD05103140	10kΩ
RL67	1	1	1	GD05103140	10kΩ
RL68	1	1	1	GD05103140	10kΩ
RL69	1	1	1	GD05681140	680Ω
RL71	1	1	1	GD05273140	27kΩ
RL72	1	1	1	GD05473140	47kΩ
RL73	1	1	1	GD05473140	47kΩ

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
RR01	1	1	1	GD05103140	10kΩ
RR02	1	1	1	GD05104140	100kΩ
RR03	1	1	1	GD05473140	47kΩ
RR04	1	1	1	GD05473140	47kΩ
RR05	1	1	1	GD05104140	100kΩ
RR06	1	1	1	GD05563140	56kΩ
RR07	1	1	1	GD05104140	100kΩ
RR08	1	1	1	GD05563140	56kΩ
RR09	1	1	1	GD05102140	1kΩ
RR10	1	1	1	GD05152140	1.5kΩ
RR11	1	1	1	GD05102140	1kΩ
RR12	1	1	1	GD05223140	22kΩ
RR15	1	1	1	GD05223140	22kΩ
RR16	1	1	1	GD05223140	22kΩ
RR17	1	1	1	GD05223140	22kΩ
					PL00-SEMICONDUCTORS
QL01	1	1	1	HT206412C0	Transistor 2SB641
QL02	1	1	1	HT206412C0	Transistor 2SB641
QL03	1	1	1	HT206412C0	Transistor 2SB641
QL04	1	1	1	HT206412C0	Transistor 2SB641
QL05	1	1	1	HT206412C0	Transistor 2SB641
QL06	1	1	1	HT206412C0	Transistor 2SB641
QL07	1	1	1	HT206412C0	Transistor 2SB641
QL08	1	1	1	HC10094050	IC TD62104P
QL09	1	1	1	HC10133030	IC LL6502C
QL10	1	1	1	HC10048050	IC TC5066BP
QL11	1	1	1	HC10121030	IC LM6416E
QL12	1	1	1	HT406362B0	Transistor 2SD636
QL13	1	1	1	HT406362B0	Transistor 2SD636
QL14 ~ QL25	12	12	12	HD20001000	Diode 1S1555
QL26	1	1	1	HD30045010	Zener HZ9L-1C
QR01	1	1	1	HT406362B0	Transistor 2SD636
QR02	1	1	1	HT406362B0	Transistor 2SD636
QR03	1	1	1	HT406363B0	Transistor 2SD636
QR04	1	1	1	HD20001000	Diode 1S1555
QR05	1	1	1	HD20001000	Diode 1S1555
QR06	1	1	1	HD20001000	Diode 1S1555
QR07	1	1	1	HD20001000	Diode 1S1555
QR08	1	1	1	HD20001000	Diode 1S1555
QR10	1	1	1	HT206412C0	Transistor 2SB641
QR11	1	1	1	HD30025060	Zener RD3.3E-B1
					PL00-MISCELLANEOUS
JL01	1	1	1	YP07001430	Plug (6P)
JL02	1	1	1	YP07001440	Plug (6P)
JL03	1	1	1	YP07001440	Plug (7P)
XL01	1	1	1	FC04003020	Seramic, Vibrator (400kHz)

• (N): for Europe
• (A): for Australia
• (P): for PX

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
					PY00-FRONT LED SWITCH CIRCUIT BOARD
PY00	1	1	1	YK250H2520	P.W. Board, Front Led Switch
	1	1	1	ZZ249H8520	P.W. Board Assembly
					PY00-RESISTORS
					(All Resistors are ±5% & ¼W)
RY01 ~ RY11	11	11	11	GD05820140	82Ω
RY12 ~ RY15	4	4	4	GD05680140	68Ω
RY16 ~ RY19	4	4	4	GD05820140	82Ω
RY22 ~ RY24	3	3	3	GD05820140	82Ω
RY25 ~ RY31	7	7	7	GD05680140	68Ω
					PY00-SEMICONDUCTOR
QY01 ~ QY26	26	26	26	HD20001000	Diode 1S1555
QY27 ~ QY31	5	5	5	HI10022320	L.E.D. GL-5NG10
QY32 ~ QY37	6	6	6	HI10023320	L.E.D. GL-5HD10
QY38	1	1	1	HI10053020	L.E.D. LN842RP
QY39	1	1	1	HI10053020	L.E.D. LN842RP
QY40	1	1	1	HI10053020	L.E.D. LN842RP
QY41	1	1	1	HI10053020	L.E.D. LN842RP
QY42	1	1	1	HI10027320	L.E.D. GL-9HD24
QY43	1	1	1	HI10023320	L.E.D. GL-5HD10
QY44	1	1	1	HI10027320	L.E.D. GL-9HD24
QY45	1	1	1	HI10023320	L.E.D. GL-5HD10
QY48	1	1	1	HI10023320	L.E.D. GL-5HD10
QY49	1	1	1	HI10028320	L.E.D. GL-9HD4
QY50	1	1	1	HI10028320	L.E.D. GL-9HD4
QY51	1	1	1	HQ10201050	Display TLG322
					PY00-MISCELLANEOUS
JY01	1	1	1	YP07001410	Plug (6P)
JY02	1	1	1	YP07001420	Plug (7P)
JY03	1	1	1	YP07001420	Plug (7P)
SY01 ~ SY26	26	26	26	SP01010570	Push Switch

REF. DESIG.	Q'TY N	A	P	PART NO.	DESCRIPTION
					PT00-SPEAKER SWITCH CIRCUIT BOARD
PT00	1	1	1	YK250H2530	P.W. Board, Speaker Switch
	1	1	1	ZZ250H2530	P.W. Board Assembly
					PT00-RESISTORS
					(All Resistors are ±5% & ¼W)
RT01	1	1	1	GD05102140	1kΩ
RT02	1	1	1	GD05102140	1kΩ
					PT00-MISCELLANEOUS
ST01	1	1	1	SP04020380	Push Switch, Speaker
					PT50-SPEAKER L.E.D. CIRCUIT BOARD
PT50	1	1	1	YK250H2540	P.W. Board, Speaker L.E.D.
	1	1	1	ZZ250H2540	P.W. Board Assembly
					PT50-SEMICONDUCTORS
QT51	1	1	1	HI10028320	L.E.D. GL-9HD4
QT52	1	1	1	HI10028320	L.E.D. GL-9HD4
					PT50-MISCELLANEOUS
JT51	1	1	1	YJ07000990	Jack (3P)
					PW50-HEAD PHONE CIRCUIT BOARD
PW50	1	1	1	YK250H2550	P.W. Board, Head Phone
	1	1	1	ZZ250H2550	P.W. Board Assembly
					PW50-RESISTORS
					(All Resistors are ±5% & 2W)
RW51	1	1	1	GA05331020	330Ω
RW52	1	1	1	GA05331020	330Ω
					PW50-MISCELLANEOUS
JW51	1	1	1	YJ01001790	Jack, Head Phone
JW52	1	1	1	YJ07000860	Jack (3P)
					P700-MAIN AMP. CIRCUIT BOARD
P700	1	1	1	YG250H0010	P.W. Board, Main Amp
	1	1	1	ZZ249H0010	P.W. Board Assembly
					P700-CAPACITORS
C401	1	1	1	EA33505030	Elect 3.3μF 50V
C402	1	1	1	EA33505030	Elect 3.3μF 50V
C405	1	1	1	DD15101370	Ceramic 100pF ±5%
C406	1	1	1	DD15101370	Ceramic 100pF ±5%
C407	1	1	1	EA10701030	Elect 100μF 10V
C408	1	1	1	EA10701030	Elect 100μF 10V
C409	1	1	1	DF16332300	Film 3300pF ±10%
C410	1	1	1	DF16332300	Film 3300pF ±10%
C411	1	1	1	DF16123300	Film 0.012μF ±10%
C412	1	1	1	DF16123300	Film 0.012μF ±10%
C413	1	1	1	DF15103310	Film 0.01μF ±5%
C414	1	1	1	DF15103310	Film 0.01μF ±5%
C415	1	1	1	EA33505030	Elect 3.3μF 50V
C416	1	1	1	EA33505030	Elect 3.3μF 50V
C417	1	1	1	DF15472310	Film 4700pF ±5%
C418	1	1	1	DF15472310	Film 4700pF ±5%
C419	1	1	1	EA22702530	Elect 220μF 25V
C420	1	1	1	EA22702530	Elect 220μF 25V
C421	1	1	1	DK17103300	Ceramic 0.01μF ±20%

• (N): for Europe
• (A): for Australia
• (P): for PX

REF. DESIG.	QTY N	A	P	PART NO.	DESCRIPTION
C751	1	1	1	DK16221550	Ceramic 220pF ±10%
C752	1	1	1	DK16221550	Ceramic 220pF ±10%
C753	1	1	1	DK16221550	Ceramic 220pF ±10%
C754	1	1	1	DK16221550	Ceramic 220pF ±10%
C755	1	1	1	DF15104300	Film 0.1μF ±5%
C756	1	1	1	DF15104300	Film 0.1μF ±5%
C757	1	1	1	DF15104300	Film 0.1μF ±5%
C758	1	1	1	DF15104300	Film 0.1μF ±5%
C759	1	1	1	EA47410030	Elect 0.47μF 100V
C760	1	1	1	EA47410030	Elect 0.47μF 100V
C761	1	1	1	EA47410030	Elect 0.47μF 100V
C762	1	1	1	EA47410030	Elect 0.47μF 100V
C801	1	1	1	DK18103560	Ceramic 0.01μF
C802	1	1	1	DK18103560	Ceramic 0.01μF
⚠C803	1	1	1	DK18103560	Ceramic 0.01μF
⚠C804	1	1	1	DK18103560	Ceramic 0.01μF
⚠C805	1	1	1	DK18103560	Ceramic 0.01μF
⚠C806	1	1	1	DK18103560	Ceramic 0.01μF
⚠C807	1	1	1	EB15903510	Elect 15000μF 35V
⚠C808	1	1	1	EB15903510	Elect 15000μF 35V
⚠C809	1	1	1	EB15903510	Elect 15000μF 35V
⚠C810	1	1	1	EB15903510	Elect 15000μF 35V
C811	1	1	1	EA33703530	Elect 330μF 35V
C812	1	1	1	EA33703530	Elect 330μF 35V
C813	1	1	1	EA47602530	Elect 47μF 25V
C814	1	1	1	EA47602530	Elect 47μF 25V
C815	1	1	1	EA10702530	Elect 100μF 25V
C816	1	1	1	EA10702530	Elect 100μF 25V
C817	1	1	1	EA10801630	Elect 1000μF 16V
C818	1	1	1	EA47602530	Elect 47μF 25V
C819	1	1	1	EA10701630	Elect 100μF 16V
CN01	1	1	1	EA47405030	Elect 0.47μF 50V
CN02	1	1	1	EA47601030	Elect 47μF 10V
CN03	1	1	1	EA22601630	Elect 22μF 16V
CN04	1	1	1	EA10505030	Elect 1μF 50V
CN05	1	1	1	DF16152300	Film 1500pF ±10%
CN06	1	1	1	DF16152300	Film 1500pF ±10%
CN07	1	1	1	DF16152300	Film 1500pF ±10%
CN08	1	1	1	DF16152300	Film 1500pF ±10%
CN09	1	1	1	EA22605030	Elect 22μF 50V
CN10	1	1	1	EA10505030	Elect 1μF 50V
CN11	1	1	1	EA10505030	Elect 1μF 50V
CN12	1	1	1	EA10505030	Elect 1μF 50V
CN13	1	1	1	EA10505030	Elect 1μF 50V

REF. DESIG.	QTY N	A	P	PART NO.	DESCRIPTION
CU01	1	1	1	DK16561300	Ceramic 680pF ±10%
CU02	1	1	1	DK16561300	Ceramic 680pF ±10%
CU03	1	1	1	EA10601630	Elect 10μF 16V
⚠CU04	1	1	1	DF15103310	Film 0.01μF ±5%
CU05	1	1	1	DK16151300	Ceramic 150pF ±10% 50V
CU06	1	1	1	DK16151300	Ceramic 150pF ±10% 50V
CU07	1	1	1	DD15220370	Ceramic 22pF ±5% 50V
					P700-RESISTORS
					(All Resistors are ±5% & ¼W)
R401	1	1	1	GD05154140	150kΩ
R402	1	1	1	GD05154140	150kΩ
R405	1	1	1	GD05683140	68kΩ
R406	1	1	1	GD05683140	68kΩ
R407	1	1	1	GD05222140	2.2kΩ
R408	1	1	1	GD05222140	2.2kΩ
R419	1	1	1	GD05561140	560Ω
R420	1	1	1	GD05561140	560Ω
R421	1	1	1	GD05223140	22kΩ
R422	1	1	1	GD05223140	22kΩ
R423	1	1	1	GD05274140	270kΩ
R424	1	1	1	GD05274140	270kΩ
R427	1	1	1	GD05103140	10kΩ
R428	1	1	1	GF05103140	10kΩ
R429	1	1	1	GG05271140	270Ω
R430	1	1	1	GG05271140	270Ω
⚠R751	1	1	1	GG05151120	150Ω ½W
⚠R752	1	1	1	GG05151120	150Ω ½W
⚠R753	1	1	1	GG05100140	10Ω
⚠R754	1	1	1	GG05100140	10Ω
⚠R755	1	1	1	GG05100140	10Ω
⚠R756	1	1	1	GG05100140	10Ω
⚠R757	1	1	1	BW10000060	0.22Ω 5W x 2
⚠R758	1	1	1	BW10000060	0.22Ω 5W x 2
R761	1	1	1	GA05047010	4.7Ω 1W
R762	1	1	1	GA05047010	4.7Ω 1W

• (N): for Europe
• (A): for Australia
• (P): for PX

REF. DESIG.	QTY N	A	P	PART NO.	DESCRIPTION
R763	1	1	1	GA05047020	4.7Ω 2W
R764	1	1	1	GA05047020	4.7Ω 2W
R765	1	1	1	GA05100140	10Ω
R766	1	1	1	GG05100140	10Ω
R767	1	1	1	GG05100140	10Ω
R768	1	1	1	GG05100140	10Ω
R804	1	1	1	GD05102140	10kΩ
R805	1	1	1	GD05102140	10kΩ
R806	1	1	1	GD05102140	10kΩ
R807	1	1	1	RF05270120	Fusible 27Ω ½W
R808	1	1	1	RF05270120	Fusible 27Ω ½W
R810	1	1	1	GG05100120	10Ω ½W
RN01	1	1	1	GD05473140	47kΩ
RN02	1	1	1	GD05683140	68kΩ
RN03	1	1	1	GD05683140	68kΩ
RN04	1	1	1	GD05273140	27kΩ
RN05	1	1	1	GD05683140	68kΩ
RN06	1	1	1	GD05224140	220kΩ
RN07	1	1	1	GD05273140	27kΩ
RN08	1	1	1	GA05222010	2.2kΩ
RN09	1	1	1	GD05104140	100kΩ
RN10	1	1	1	GD05683140	68kΩ
RN11	1	1	1	GD05683140	68kΩ
RN12	1	1	1	GD05333140	33kΩ
RN13	1	1	1	GD05153140	15kΩ
RN14	1	1	1	GG05682140	6.8kΩ
RN15	1	1	1	GG05682140	6.8kΩ
RN16	1	1	1	GG05682140	6.8kΩ
RN17	1	1	1	GG05682140	6.8kΩ
RN18	1	1	1	GD05682140	6.8kΩ
RN19	1	1	1	GD05682140	6.8kΩ
RN20	1	1	1	GG05221140	220Ω
RN21	1	1	1	GG05221140	220Ω
RN22	1	1	1	GG05221140	220Ω
RN23	1	1	1	GG05271140	220Ω
RN24	1	1	1	GD05273140	27kΩ
RN25	1	1	1	GD05222140	2.2kΩ
RN26	1	1	1	GD05104140	100kΩ
RN27	1	1	1	GD05471140	470Ω
RN28	1	1	1	GD05471140	470Ω
RN29	1	1	1	GD05471140	470Ω
RN30	1	1	1	GD05471140	470Ω
RU01	1	1	1	GD05103140	10kΩ
RU02	1	1	1	GD05103140	10kΩ
RU03	1	1	1	GD05103140	10kΩ
RU04	1	1	1	GD05103140	10kΩ
RU05	1	1	1	GD05102140	1kΩ
RU06	1	1	1	GD05102140	1kΩ
RU07	1	1	1	GD05393140	39kΩ
RU08	1	1	1	GD05393140	39kΩ
RU09	1	1	1	GD05332140	3.3kΩ
RU10	1	1	1	GD05332140	3.3kΩ

REF. DESIG.	QTY N	A	P	PART NO.	DESCRIPTION
RU11	1	1	1	GD05104140	100kΩ
RU12	1	1	1	GD05104140	100kΩ
RU13	1	1	1	GD05393140	39kΩ
RU14	1	1	1	GD05393140	39kΩ
RU15	1	1	1	GD05104140	100kΩ
RU16	1	1	1	GD05104140	100kΩ
RU17	1	1	1	GD05473140	47kΩ
RU18	1	1	1	GD05222140	2.2kΩ
RU19	1	1	1	GD05152140	1.5kΩ
RU20	1	1	1	GG05222120	2.2kΩ ½W
RU21	1	1	1	GG05222120	2.2kΩ ½W
RU22	1	1	1	GD05152140	1.5kΩ
RU23	1	1	1	GD05152140	1.5kΩ
RU24	1	1	1	GG05102140	1kΩ
RU25	1	1	1	GG05101140	100Ω
RU26	1	1	1	GG05101140	100Ω
	1	1	1		
	1	1	1		**P700-SEMICONDUCTORS**
Q405	1	1	1	HC10026090	IC NJM-2041-DD
	1	1	1		
Q751	1	1	1	HT323442A0	Transistor 2SC2344 (D or E)
Q752	1	1	1	HT323442A0	Transistor 2SC2344 (D or E)
Q753	1	1	1	HT110112A0	Transistor 2SA1011 (D or E)
Q754	1	1	1	HT110112A0	Transistor 2SA1011 (D or E)
Q755	1	1	1	HT325802B0	Transistor 2SC2580 (O or Y)
Q756	1	1	1	HT325802B0	Transistor 2SC2580 (O or Y)
Q757	1	1	1	HT111052B0	Transistor 2SA1105 (O or Y)
Q758	1	1	1	HT111052B0	Transistor 2SA1105 (O or Y)
Q759	1	1	1	HV00009080	Varistor STV-3HR (O or Y)
Q760	1	1	1	HV00009080	Varistor STV-3HR (O or Y)
Q761	1	1	1	HD20005010	Diode W06B
Q762	1	1	1	HD20005010	Diode W06B
Q763	1	1	1	HD20005010	Diode W06B
Q764	1	1	1	HD20005010	Diode W06B
⚠Q801	1	1	1	HD20008290	Diode S4VB20
⚠Q802	1	1	1	HE20009290	Diode S5VB20
Q803	1	1	1	HD20015030	Diode DS135D
Q804	1	1	1	HD20015030	Diode DS135D
Q805	1	1	1	HD20015030	Diode DS135D
Q806	1	1	1	HD20015030	Diode ES135D
Q807	1	1	1	HT403132P0	Transistor 2SD313 (D or E)
Q808	1	1	1	HT205072P0	Transistor 2SB507 (D or E)
Q809	1	1	1	HD30014010	Zener HZ16L
Q810	1	1	1	HD30014010	Zener HZ16L
Q811	1	1	1	HD20015030	Diode DS135D
Q812	1	1	1	HT403132P0	Transistor 2SD313 (D or E)
Q813	1	1	1	HD30044010	Zener HZ6L-3C

- (N) for Europe
- (A) for Australia
- (P) for PX

REF. DESIG.	QTY N	A	P	PART NO.	DESCRIPTION
QN01	1	1	1	HC10042050	IC TA7317P
QN02	1	1	1	HD20003210	Diode 1S2471
QN03	1	1	1	HD20015030	Diode DS1350
QN04	1	1	1	HD20001000	Diode 1S1555
QN05	1	1	1	HD20001000	Diode 1S1555
QN06	1	1	1	HD20001000	Diode 1S1555
QN07	1	1	1	HD20001000	Diode 1S1555
QN08	1	1	1	HT313181R0	Transistor 2SC1318R
QN09	1	1	1	HT313181R0	Transistor 2SC1318R
QN10	1	1	1	HT107201R0	Transistor 2SA720R
QN11	1	1	1	HT107201R0	Transistor 2SA720R
QN12	1	1	1	HD20002210	Diode 1S2472
QN13	1	1	1	HD20002210	Diode 1S2472
QN14	1	1	1	HD20002210	Diode 1S2472
QN15	1	1	1	HD20002210	Diode 1S2472
QN16	1	1	1	HT313181R0	Transistor 2SC1318R
QN17	1	1	1	HT313181R0	Transistor 2SC1318R
QN18	1	1	1	HT107201R0	Transistor 2SA720R
QU01	1	1	1	HD30044010	Zener HZ6L-3C
QU02	1	1	1	HD30044010	Zener HZ6L-3C
QU03	1	1	1	HD10003030	Diode 1S188FM
QU04	1	1	1	HD10003030	Diode 1S188FM
QU05	1	1	1	HD10003030	Diode 1S188FM
QU06	1	1	1	HD10003030	Diode 1S188FM
QU07	1	1	1	HC10022090	IC NJM2903D
QU08	1	1	1	HC712200A0	IC HD74LS122P
QU09	1	1	1	HT410652B0	Transistor 2SD1065
QU10	1	1	1	HT208292B0	Transistor 2SB829
QU11	1	1	1	HT323441D0	Transistor 2SC2344D
QU12	1	1	1	HT110111D0	Transistor 2SA1011D
QU13	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
QU14	1	1	1	HT111752C0	Transistor 2SA1175 (HF or FF)
QU15	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
QU16	1	1	1	HT111752C0	Transistor 2SA1175 (HF or FF)
QU17	1	1	1	HD20001000	Diode 1S1555
QU18	1	1	1	HD20011290	Diode S3V20
QU19	1	1	1	HD20011290	Diode S3V20
					P700-MISCELLANEOUS
⚠F801	1	1	1	FU27215010	Protector Unit (2.7A)
⚠F802	1	1	1	FU27215010	Protector Unit (2.7A)
⚠F803	1	1	1	FU27215010	Protector Unit (2.7A)
J401	1	1	1	YT02020290	Terminal RCA Pin Jack (2P)
J751	1	1	1	YP06001060	Plug (7P)
J752	1	1	1	YP06001070	Plug (9P)
L751	1	1	1	LL23905120	Coil, Choke
L752	1	1	1	LL23905120	Coil, Choke
LN01	1	1	1	LY20240190	Relay

REF. DESIG.	QTY N	A	P	PART NO.	DESCRIPTION
					P850-FUSE CIRCUIT BOARD
P850	1	1		YK250H1550	P.W. Board, Fuse
	1	1		ZZ249H7550	P.W. Board Assembly
					P850-MISCELLANEOUS
F851	1	1		FS10315800	Fuse, 3.15A
F852	1	1		FS10315800	Fuse, 3.15A
F853	1	1		FS10400800	Fuse, 4.0A
J801	1	1		YP06001070	Plug (9P)
J860	1	1		YJ06001430	Plug (9P)
J861	1	1		YJ08000270	Jack, 20mm Fuse Clip
J862	1	1		YJ08000270	Jack, 20mm Fuse Clip
J863	1	1		YJ08000270	Jack, 20mm Fuse Clip
J864	1	1		YJ08000270	Jack, 20mm Fuse Clip
J865	1	1		YJ08000270	Jack, 20mm Fuse Clip
J866	1	1		YJ08000270	Jack, 20mm Fuse Clip
J867	1	1		YJ08000270	Jack, 20mm Fuse Clip
J868	1	1		YJ08000270	Jack, 20mm Fuse Clip
					P.W. BOARD WIRE PARTS
WE01	1	1	1	YU04100260	Jumper Lead (JE01-J817)
WE51	1	1	1	YU04220260	Jumper Lead (WE51-JE03)
WE52	1	1	1	YU04220260	Jumper Lead (WE52-JE02)
WG01	1	1	1	YU04200260	Jumper Lead (JG01-JE05)
WL01	1	1	1	YU07320260	Jumper Lead (WL01-JS05)
WL02	1	1	1	YU08300260	Jumper Lead (WL02-JS06)
WL03	1	1	1	YU06240260	Jumper Lead (WL03-JE04)
WL04	1	1	1	YU04280260	Jumper Lead (WL04-JG02)
WL05	1	1	1	YU04200260	Jumper Lead (WL05-JS52)
WS01	1	1	1	YU04080260	Jumper Lead (WS01-WS01)
WS07	1	1	1	YU03200260	Jumper Lead (JS07-J402)
WS08	1	1	1	YU02220260	Jumper Lead (JS08-JW11)
WS09	1	1	1	YU03260260	Jumper Lead (JS09-JE06)
WS10	1	1	1	YU03240260	Jumper Lead (JS10-J703)
WS51	1	1	1	YU04120260	Jumper Lead (JS51-J819)
WS81	1	1	1	YU03240260	Jumper Lead (JS81-J818)
WT07	1	1	1	YU03150260	Jumper Lead (JT07-JW52)
WT09	1	1	1	YU02400260	Jumper Lead (JT09-JW05)
WT10	1	1	1	YU03120260	Jumper Lead (JT10-JT51)
WW04	1	1	1	YU02180260	Jumper Lead (JW04-J806)
WY01	1	1	1	YB00050100	Connective Cord (JY01-JL01)
WY02	1	1	1	YB00050110	Connective Cord (JY02-JL02)
WY03	1	1	1	YB00050110	Connective Cord (JY03-JL03)

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY:
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may incresse risk of fire or electrical shock hazard.

19. TECHNICAL SPECIFICATIONS

MODEL PM630

AUDIO SECTION

POWER OUTPUT PER CHANNEL
- DIN 4 OHMS ..... 75 W
- RMS 4 OHMS 1 kHz ..... 70 W
- DIN 8 OHMS 1 kHz ..... 65 W
- RMS 8 OHMS 1 kHz ..... 55 W

TOTAL HARMONIC DISTORTION AT 8 OHMS ..... 0.03 %
I.M. DISTORTION ..... 0.03 %
DAMPING FACTOR 8 OHMS (1 kHz) 70

MAIN IN Sensitivity ..... 1.2 V
MAIN IN Impedance ..... 40 k ohms
Frequency Response, ±1 dB ..... 10 Hz ~ 50 kHz
Signal to Noise Ratio, MAIN IN ..... 95 dB

MM CARTRIDGE INPUT

Frequency Response (RIAA) ..... ±0.3 dB
Signal to Noise Ratio ..... 85 dB
Input Impedance ..... 47 k ohms
Input Capacitance ..... 200 pF
Input Sensitivity ..... 2.5 mV
Equivalent Input Noise ..... 1.0 μV

AUX. INPUT

Input Impedance ..... 27 k ohms
Input Sensitivity ..... 150 mV
Frequency Response, ±1 dB ..... 10 Hz ~ 50 kHz
Signal to Noise Ratio ..... 92 dB

OUTPUT VOLTAGE

Tape Out ..... 460 mV
Preamplifier Output ..... 1.2 V

OUTPUT IMPEDANCE

Tape Out ..... 270 ohms
Preamplifier Output ..... 270 ohms

GENERAL

Power Requirements ..... 110/120/220/240 V AC, 50/60 Hz
Power Consumption at Rated Output, both Channels Driven ..... 230 W
Dimensions
- Panel Width ..... 416 mm
- Panel Height ..... 100 mm
- Depth ..... 300 mm

Weight
- Unit Alone ..... 7.7 kg

Specifications and appearance are subject to change for modification without notice.

SCHEMATIC DIAGRAM

QE03
HC10003090
NJM4558D

Q405
HC10008090
NJM4558DD

QS01,QS02
HC10091050
TC9152P

QS03~QS05
QE01,QE02
QG02,QG04
HC10021090
NJM4560DD

QS06
QE04~QE06
QG03
HC406600B0
IC-4066

QS81
HC10048050
TC5066BP

QS82,QS83
HD30036010
HZ6L 5.5V

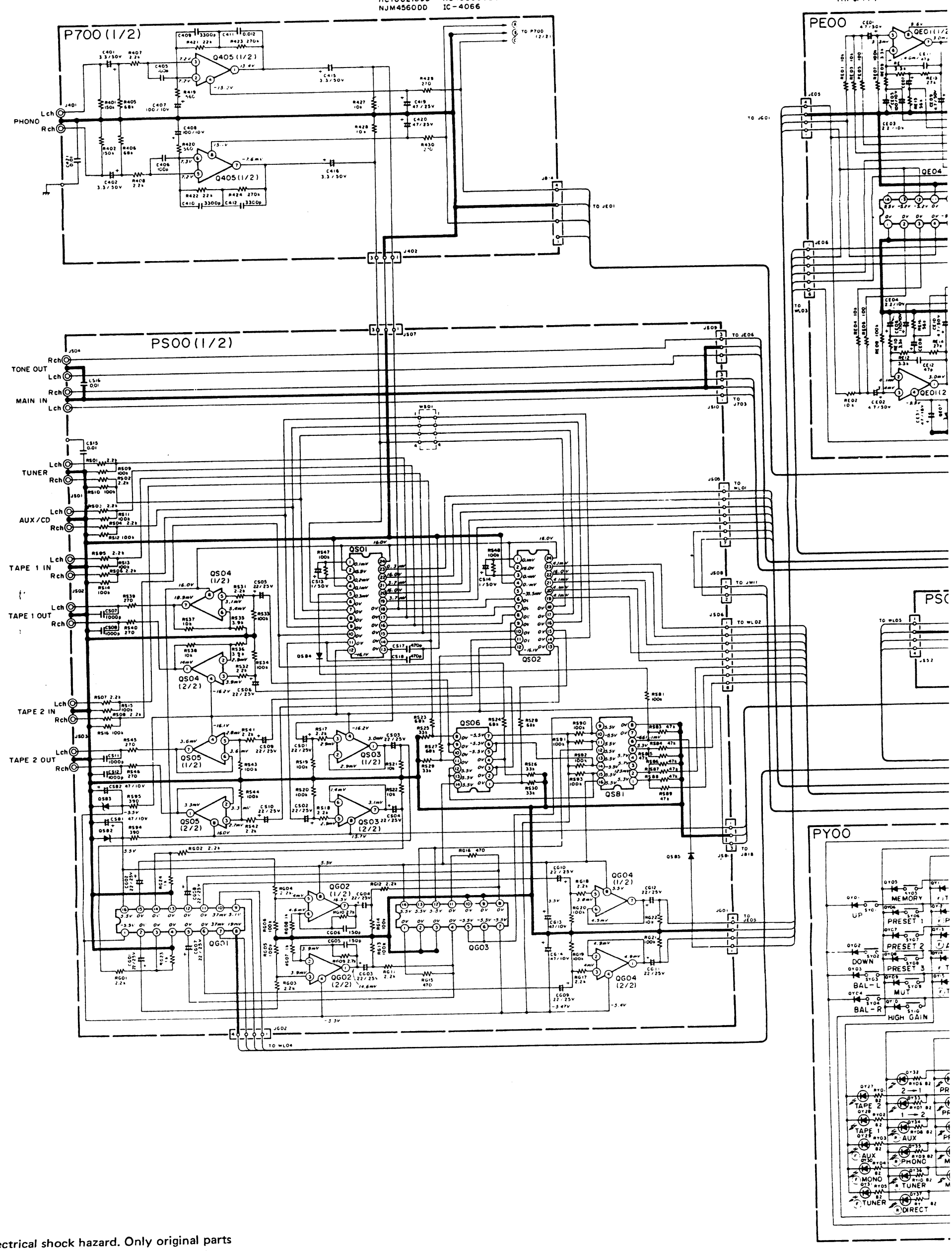
QG01
HC10092052
TC9154P

QE07,QE08
HD30045011
HZ9L-IC 9.3V

Q701
HC10129030
STK306211A

Q702,Q703
QU13,QU15
HT327852C1
2SC2785
(HF or FF)

Q704,Q705
Q809,Q810
HD30014010
HZ16L

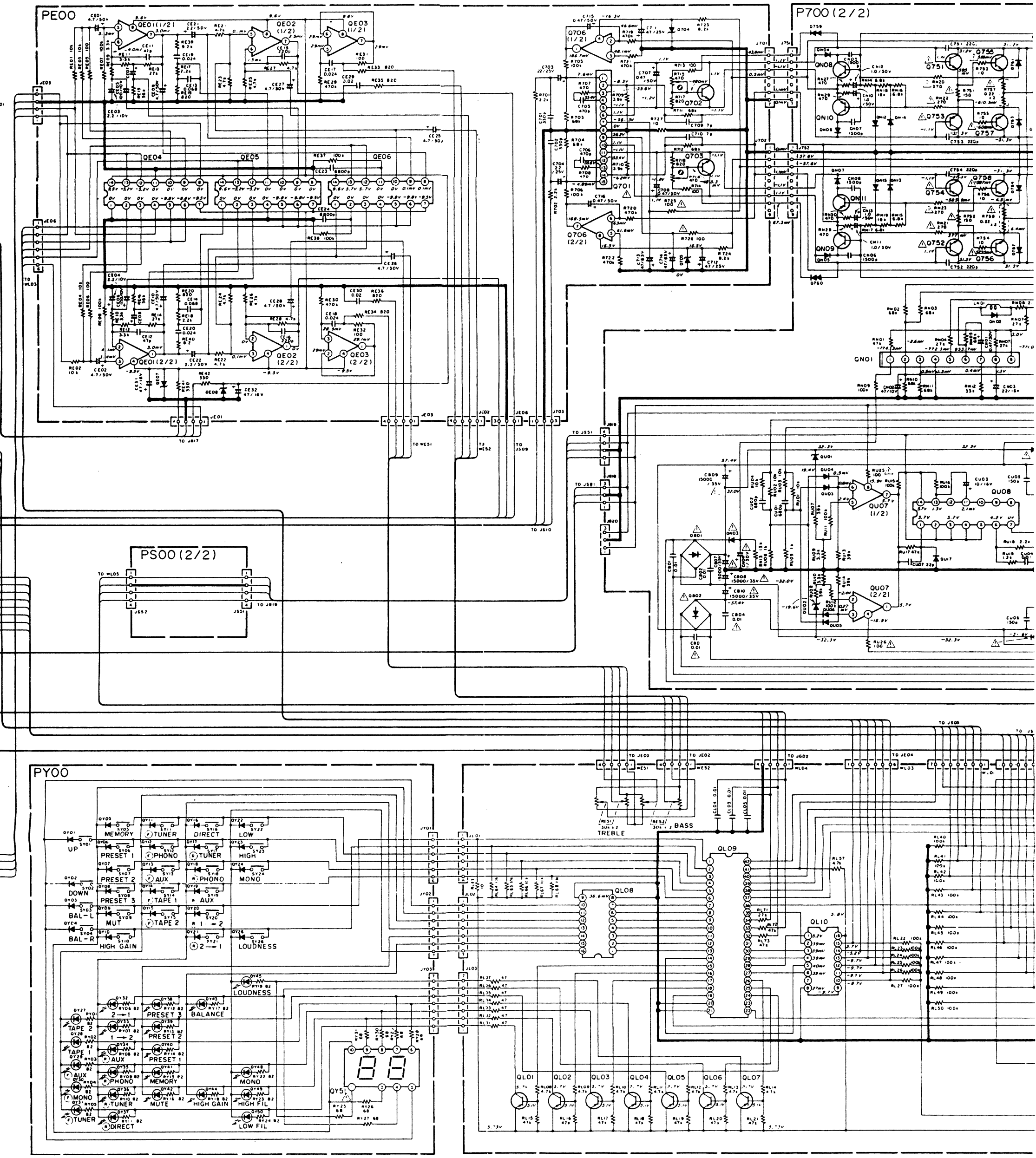


NOTE ON SAFETY:

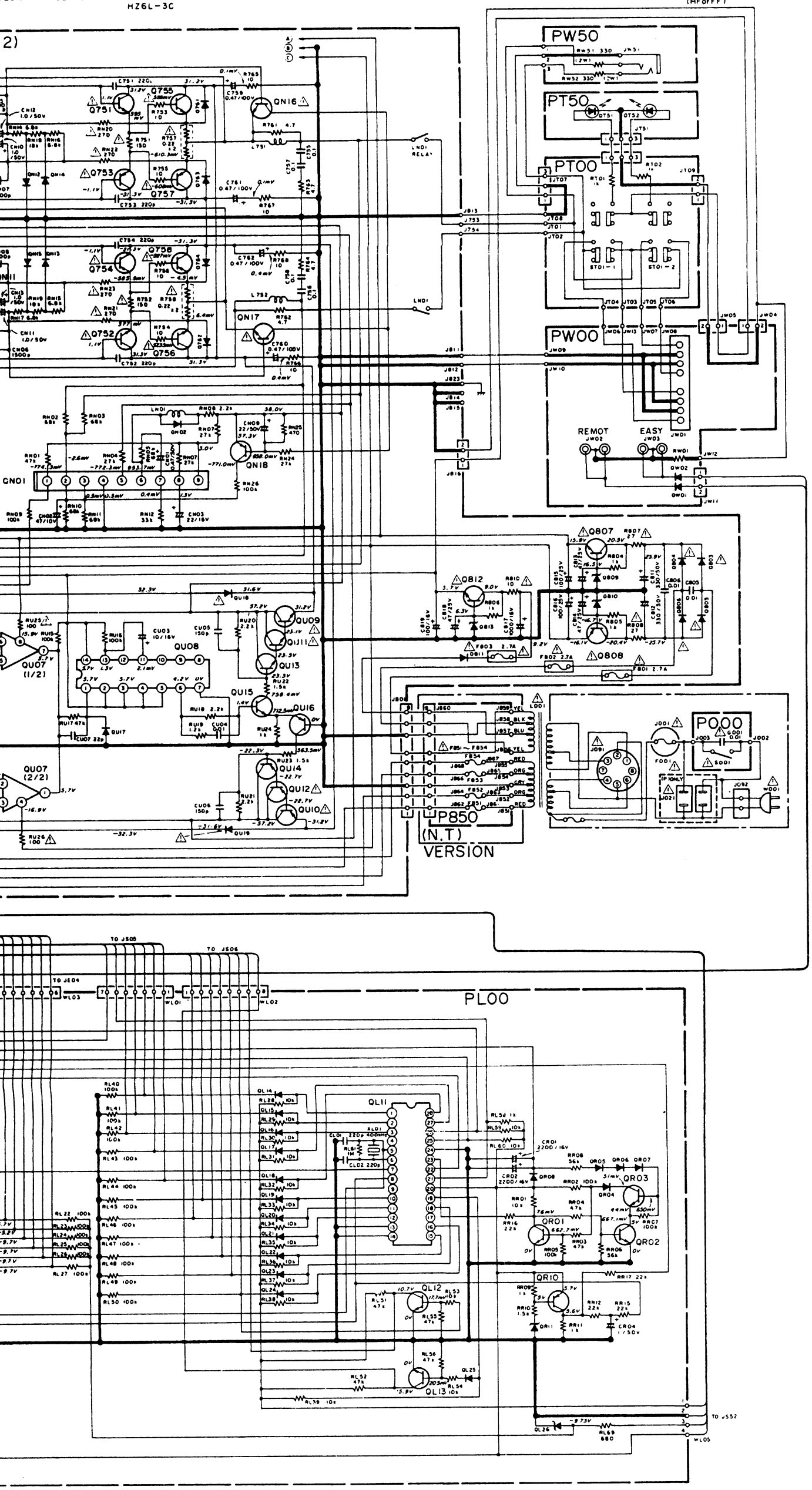
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

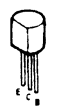
Components and wiring are subject to change for modification without notice.

Q701	Q702, Q703	Q704, Q705	Q706	Q751, Q752	Q753, Q754	Q755, Q756	Q757 Q758	Q759, Q760	Q761~Q764	QN01	QN02	QN03	QN08, QN09	QN10, QN11	QN12~QN15	QU01, QU02	QU0
HC10129030	QU13, QU15	Q809, Q810	HC10007090	HT323442A0	QU12	HT328372B0	HT111362B0	HV00009080	HD20005010	HC10042050	HD200032010	Q803~Q806	HT313181R0	HT107201R0	HD200C2210	Q813	HDI0
STK306211A	HT327852C1	HD30014010	NJM4560D	2SC2344	HT110112A0	2SC2837	2SA1186	STV-3HR	W06B	TA7317P	IS2471	Q811	2SC1318R	2SA720R	IS2472	HD30044010	ISIB
	2SC2785	HZ16L		(D,E)	2SA1011(D,E)	(O,Y)	(O,Y)	(O,Y)				HD200150320				HZ6L-3C	
	(HF or FF)											DS135D					



,QN11 0720IR0 720R	QN12~QN15 HD20002210 IS2472	QU01,QU02 Q813 HD30044010 HZ6L-3C	QU03~QU06 HD10003030 IS188FM	QU07 HC10022090 NJM2903D	QU08 HC712200A0 HD74LS122P	QU09 HT41065280 2SD1065	QU10 HT20829280 2SB829	QU11 HT32344100 2SC2344D	QU14,QU16 HT1111752C1 2SA1175 (HF or FF)	QU18,QU19 HD20011290 S3V20	Q801 HE20008290 S4VB20	Q802 HE20009290 S5VB20	Q807,Q812 HT40313280 2SD313 (D,E)	Q808 HT20507280 2SB507 (D,E)	QY01~QY26,QL14~QL25 QR04~QR08,QN04~QN07 QU17,QS84,QS85,QW01,QW02 HD20001000 IS1555 etc	





QN08,QN09
2SC1318R

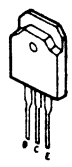
QN10,QN11
2SA720R

QN16,QN17
2SC1845F

QN18
2SA992F

QY27~QY32
HI10022320
GL-5NG10

QY32~QY37
QY43,QY45~QY48
HI10023320
GL-5HD10



Q755,Q756
2SC2837
(O,Y)

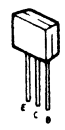
QU10
2SB829

QY38~QY41
HI10053020
LN842RP

Q757,Q758
2SA1186
(O,Y)

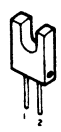
QY42,QY44
HI10027320
GL-9HD24

QU09
2SD1065



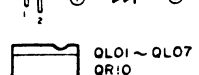
Q702,Q703
QU13,QU15
2SC2785
(HF,FF)

QU14,QU16
2SA1175
(HF,FF)

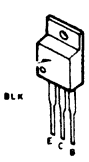


Q759,Q760
STV-3HR
(O,Y)

QY49,QY50
QT51,QT52
HI10028320
GL-9HD4



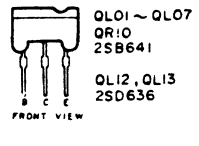
QY51
HQ10201050
TLG322



Q751,Q752
2SC2344
(D,E)

QU11
2SC2344D

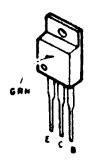
Q807,Q812
2SD313
(D,E)



QL01~QL07
QR10
2SB641

QL12,QL13
2SD636

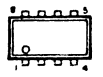
QL01~QL07,QR10
HT20641280
2SB641



Q753,Q754
QU12
2SA1011
(D,E)

2SB507
(D,E)

QL08
HC10009405O
TD62104P



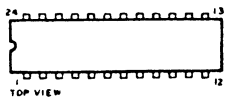
NJM4558D
QE03

NJM4560D
Q706

NJM4560DD
QS03~QS05
QE01,QE02
QG02,QG04

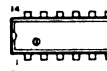
NJM2903D
QU07

QL10
HC10048050
TC5066BP



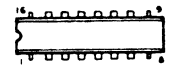
QS01,QS02
TC9152P

QL11
HC10121030
LM6416E



QS06
QE04~QE06
QG03
IC-4066

QU08
HD74LS122P



QS81
TC5066BP

QG01
TC9154P

QL12,QL13
QR01~QR03
HT40636280
2SD636

QL26
HD30045011
HZ9L-1C

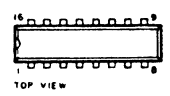
Q701
STK3082IIA

QN01
TA7317P

QR11
HD30025060
RD3.3E-B1

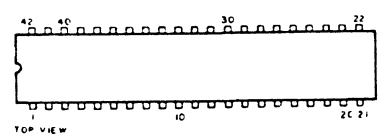
QN16,QN17
HT31845IF0
2SC1845F

QN18
HT10992IF0
2SA992F

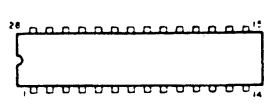


QL08
TD62104P

QL10
TC5066BP



QL09
LC6502C



QL11
LM6416E